

# HIGHER EDUCATION: HANDBOOK OF THEORY AND RESEARCH

Volume XX

*Edited by*

**JOHN C. SMART**

University of Memphis

**HIGHER EDUCATION:**  
**Handbook of Theory and Research**  
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**Handbook of Theory and Research**  
Volume XX

Edited by  
**John C. Smart**  
*University of Memphis*

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## 1. A SERENDIPITOUS SEARCH FOR A CAREER IN HIGHER EDUCATION

Marvin W. Peterson  
*University of Michigan*

John Smart's invitation to write this autobiographical essay was at once enticing and at the same time a bit unnerving. The enticement is that it does not require the carefully crafted, systematic preparation of most of our publications. His suggestion that we reflect on our career and thoughts about our field is refreshingly open ended. The unnerving part is that it reminds us that we are invited, presumably, because we have had a career (it is either almost over or time to invent a new one!). Even more, our colleagues may read it and find that we are not really the person they thought we were. The efforts of my predecessors in this venture (Pace, Clark, McKeachie, Berdahl, Stark, Astin and Centra) are little help as each has his or her unique story, intent and perspective.

My intent is to provide a personal retrospective on how my unintended and largely unplanned career emerged. My perspective is from one who was among the first to complete a doctoral degree in higher education and go directly into a faculty position. If my memory is correct, in 1968 Larry Leslie, Ken Mortimer, Bob Silverman and I all completed our degrees in higher education and accepted faculty positions as assistant professors and joined the ranks of faculty who had all been trained in other disciplines and had started to develop the early programs in which we were trained. (Jerry Miller who had a Ph.D. in higher education was already in the ranks but had not started as a faculty member. Joan Stark, Ann Morey and others were close behind). ASHE did not exist nor did most of our higher education journals. Most of our doctoral student colleagues were headed toward administrative careers. I was not sure there was an academic field or career in this

domain but the prospect was enticing. So I have had an opportunity to grow up with the field as one of its early faculty products. The tale is, as the title suggests, not just unplanned, but an accidental — even serendipitous one.

### WHAT — A CAREER?

It was a hot afternoon in August, 1952 in Geneseo, Illinois on a sun-baked and well-trampled football field. When the coaches finally called a rest break during our twice a day practice sessions, those of us on the freshman squad who were “cannon fodder” for the sophomore team gladly collapsed. I was new to Geneseo having just moved there from a farm in a nearby town. The fellow closest to me was also tall, considerably heavier and shared my acerbic view of our plight. Sensing a common bond, we introduced ourselves. “I’m Marv Peterson”. “I’m Bill Colby”. We both looked startled and then burst into laughter. We had never met but were both very aware of the other.

In rural western Illinois at that time there were still some areas with one-room country schools. Since they lacked all the academic amenities, the county provided a bookmobile that made weekly rounds of each school so students could check out books. On one wall of the bookmobile was a large chart on which names of students were listed with stars next to them representing a book read and reported on in writing. Two names with the most stars were always prominent and well ahead of the others — Bill Colby and Marv Peterson. On one visit Bill would have one more than I. The next week I would be ahead. This went on our entire eighth-grade year. I am not sure we ever knew who ended up with the most, since the bookmobile did not return after we completed our last reports and there was no official recognition or prize.

After acknowledging our common connection and exchanging some informal remarks, Bill turned more serious. “What are you going to do when you are out of high school?” Not yet having set foot or officially registered in the new school, I stammered and asked what he meant. “You know, what are your career plans?” I halted again and said something like, “Maybe I’ll be a high school math teacher and coach (I knew arithmetic had been easy in elementary school and I liked sports). What do you want to do?” “Become a cardiac surgeon” came the reply confidently. Right away I knew I was in over my head. Despite this gap, we became good friends and would remain so even though our “careers” went on very different paths.

But I will always remember that unnerving conversation. It was not that I had never thought about what I might become — a farmer like my dad, a minister (my minister always wanted me to become one but I knew I did not qualify!), an engineer, an airplane pilot, president of the U.S. (my favorite aunt always said I could) — but these were always fleeting and not serious. The thought of having a career — even the notion of what that was — had never crossed my mind. But I would be reminded of it whenever Bill and I met years later. Even though it was infrequent, we would exchange reports on what we were doing. Bill went to the University of Illinois and majored in pre-med, attended Northwestern Medical School, became a cardiologist, did medical missionary work in Africa and then became a faculty member and head of department of cardiology (ironically he died of a heart condition). I, of course, wandered from a private liberal arts college majoring in engineering and math, to an MBA degree from Harvard, to a Ph.D. from Michigan in higher education and organizational psychology, to a faculty position in an emerging field that few knew existed. I would marvel at and envy Bill's unitary sense of direction and purpose. He seemed equally interested in every new turn in mine.

As I reflect, what these conversations and our differing paths did focus for me is that "career" can mean different things to different people, that it can change over time and that there are multiple paths to achieving one. Career involves not only identifying the area of one's vocational commitment but also the professional community with whom it is shared. Clearly Bill's and my approach to selecting a career were very different. His was the more rational, linear approach to career as goal achievement which is often espoused by career counselors: assessment of personal competency and interest, examination of skills and requirements for differing careers, selection of a good fit, setting goals and then developing competencies and strategies for achieving them (although Bill may have bypassed the first two steps). Mine has been one that involves an iterative search process (competence, challenge, choice, commitment, community, and contribution): developing a personal sense of ones competencies, values and general interests; being open to and seeking new opportunities and challenges; considering choices about whether to pursue a new direction that stretches or expands your competencies; making a commitment, and then finding an appropriate community in which to make a significant contribution. This usually leads one to greater self-competence and new interests, opens new opportunities and challenges and begins the cycle all over. Challenges and choices can either reinforce general career paths or take one in new directions.

Both approaches have value and shortcomings but are probably better than a Horatio Alger, externally controlled approach: working hard and waiting for some one to recognize and reward you. The remainder of this is an excursion on my iterative and somewhat serendipitous search for and life in my career in higher education.

### THE EARLY YEARS: IMPRINTING PATTERNS OF COMPETENCE AND INCLINATION

#### FAMILY, FARM AND SCHOOLING; SOME EARLY LESSONS (1944–52)

Long before my encounter with Bill, forces were at work that would shape my sense of self-competence and affect some of my later choices. When I was seven, my parents moved from a small town to a farm in western Illinois. The carefree days of a seven year old playing with friends in the neighborhood would come to an end. On the farm the nearest neighbor with kids was almost a mile away and school was a mile and a half. Responsibility, hard work and self discipline would be reinforced by the pattern of daily work — an hour or more of chores, milking cows and feeding animals in the morning; breakfast; walking to school; doing school work; walking back home; another two hours of chores; dinner and then reading or doing homework. The routine required and reinforced its own pattern of self-discipline to get everything done. Everyone had his or her responsibilities which if not done fell to someone else. Some farm chores were enjoyable — taking care of my own horse; others were not so enjoyable — cleaning my mother's chicken house. The responsibilities increased with age and strength; e.g., at eight I was the water boy for haying and threshing runs, at ten driving tractors and hauling loads, at twelve (especially if you reached your six foot -three inch adult height then) loading and stacking bales of hay or shocks of grain. At ten I also became the designated baby sitter for my two younger sisters when my parents were away. My mother was sick and in a hospital for almost a year. Since children were not allowed in hospitals at that time, this was not an occasional task.

Farm work also simultaneously reinforced a sense of both independence and the value of cooperation. Having my own horse brought a sense of both independence and freedom. I could go to a friend's house a couple of miles away to play in the summer. Being allowed to drive tractors at eight and trucks at ten gave a sense of growing up — even if a false one. From the age of ten to fourteen, I lived with and worked

for other farmers in the summer when there was not enough work at home. I was allowed to keep that money for my own enjoyment — but often it was to buy clothes we could not afford. While much farm work was often lonely — driving the tractor endlessly up and down the field for hours at a time while plowing corn — it also had periods of important emphasis on teamwork. In this era few farmers had the equipment and manpower to harvest their hay or combine their grain without help of neighbors. Usually several would ban together and help one another. Cooperation was essential as they worked to harvest their crops. As an oversized child, I was accepted as an equal by my father's friends — in a Huck Finn sense I was allowed to do the same heavy work they did but also to have a beer with them at the end of the day. Patterns of independence and experiencing the value cooperation were a constant cycle.

School was an equally important source of early lessons and, perhaps, an underestimated precursor of future choices. When we moved to the farm, I moved from a first grade class of twenty kids in a large elementary school to a one-room country school with all eight grades in one room. There were never more than fifteen kids in all eight grades and I would be the only one in my grade for the next seven years. Three of the four teachers I would have over those years were, in retrospect, good teachers, early mentors and excellent role models. Ms. Moens was young, supportive and enthusiastic and made my transition from “city” to “country” school not at all traumatic. She praised my script printing learned during my first grade year and patiently tried to teach me to write — a task which students to this day will attest that I failed. (Years later I would read an article that said handwriting quality was inversely related to intelligence. Attempts to write carefully fell by the wayside as I tried to prove my intelligence with illegible script). But she only lasted for a year — the return of a young soldier swept her from the classroom to being a farmer's wife. I would then have Ms. Mock for three years. She was middle aged, friendly but formal, and probably the best teacher one could have in such an environment. She was able to tailor the rather standardized grade level material to each student. I was quickly placed on a track where I would do all my course work for the year (3rd, 4th and 5th) in the first half of the year. The remainder of the time was spent reading and pursuing more advanced topics that she and I agreed were challenging yet interesting. In the fifth grade she began asking me to work with the younger kids on their reading and arithmetic recitation — a pattern that would continue throughout my grade school years. It was during these years that I began to enjoy reading and



learning — and maybe the seed of that response to Bill on the football field was planted — I could be a teacher. After surviving one year with a teacher who was at best a dictator, my final two years were blessed with Ms. Snider. An intense, energetic and competitive woman, she really began to challenge me to read in new areas and to think about an education beyond high school. A by product of this one room school, that I would come to understand and appreciate only years later, was the capacity to study and work in the midst of chaos — shutting out the constant noise and activity of others.

These experiences at school and on the farm were, of course, shaped and reinforced by family. Both my mother and father had done well in high school but had the misfortune of graduating in 1929. They had not had the opportunity to advance their education but were determined that their children would have it. My mother, despite her prolonged illness, was a very strong-willed woman who wanted her children to do well and reinforced the messages from school and in all of our activities. She set the rules on studying at home but would also take my sisters to town regularly for piano lessons and for other activities. She worked hard on the farm and later in various jobs to make sure we all had the opportunity to go on beyond high school. My father was athletic and dedicated to getting ahead and making things better for his children as well. But he was also more relaxed and easy going. He would drive me six miles to town every day for four years so I could participate in the town's elementary basketball team. My two younger sisters and I knew they thought we were special — but we also knew we were expected to do well in school, to make something of ourselves and to make sure that we did not disappoint them.

Another lesson from this era was the importance of making time to have fun. Although we lived in an economically marginal situation and had few amenities, my parents always found ways to make sure that, when we went to town on Saturday (shopping day), my sisters and I got to attend the matinee movies and that there was time to attend the local carnivals that used to come to nearby towns. The one room country school was a social gathering point for several events each year for all the students, parents and even relatives. Once every month my parents went to the local Grange meetings that in those days were more social than business or politics. The kids went along for an evening of games and other hi-jinks. Weddings, anniversaries, birthdays and holidays were all reasons to celebrate not just with family but with friends. Life was meant to have time for enjoyment.

HIGH SCHOOL: UNPLANNED DIVERSIONS AND NEW OPPORTUNITIES  
(1952–56)

So perhaps my response to Bill on that August day on the football field about teaching and coaching were not as impromptu as I had thought. The importance of education, the enjoyment of reading and learning, the influence of teachers as models, my role as a youthful teachers assistant, the early experience with sports and the taste of success in all of them probably contributed to my casual retort to his serious question. But moving from the farm back to town as I started high school was a new experience that would open the world a bit more. Instead of a one-room country school with no one else in my class, I was now one of over one hundred in my freshmen class. I was in a school system that was in a relatively progressive community composed mostly of Scandinavian farmers, who prospered as farm prices rose in the post World War Two era, and reasonably well paid factory workers and young professionals who worked in the booming farm equipment industry about fifteen miles to the west. There was a numerous and diverse set of churches and a tradition of supporting youth activities and their schools. Geneseo, with a population of only a little over four thousand, boasted a school that offered advanced classes, extensive extra-curricular activities and sports teams that were competitive with much larger ones in western Illinois.

Things happened quickly during high school. After two weeks as freshman cannon fodder for the sophomore football team, I found myself starting on that team. I was accepted on the team because I was able to contribute and many of them knew me from elementary school basketball days when the small town team I played for had trounced them soundly. I was a better teammate than adversary. In the classroom I was quickly identified as someone who was smart, did my work quickly and efficiently and still had time to do other things. By the middle of the first semester I was elected president of the freshman class with little understanding of how or why. I was in a milieu where unlike most of the small western Illinois communities where only 10–20% of the high school graduates went on to college in the mid 1950s, well over 50% of Geneseo's grads were advancing. Everyone — students, faculty, friends at church, etc. — just assumed I was college bound. Questions of where I would go to college and what I was going to study were commonplace. I still had not begun to process the implications of all this, much less the concept of a career.

Academically, my high school days were both horizon expanding

and challenging. In math Mr. Paxson, who would later become principal of the high school, had an ability to entice those of us with an interest into advanced courses and still get across the current content to the slowest or most resistant students. He also had a dry sense of humor and a capacity to trade quips with the sharpest or most sarcastic members of the class. He would become my model of what a good high school math teacher should be. I took Latin because everyone said that if you were going to college you should have it. Ms. Madden could have been a sergeant in Caesar's legions as she drilled us unmercifully but at the same time challenged us to do our best and to appreciate the classics. Mr. Rivenberg was a rather stiff, formal English teacher who always appeared in a courtly jacket and tie. But he taught advanced courses in world literature and in English literature in which students had to contract for grades — essentially making us responsible for the amount and type of work we would do. I recall my contract for an A in his advanced English Literature course — do all the basic course readings and get an A on the exam (the most you could get was a C if you did not do further work), do a comparative critique of the style of several classic English poets (for the B) and learn the basic pronunciation patterns of middle English and memorize portions of the original version of Chaucer's *Canterbury Tales* (for the A). He also played recordings of classic music as background in class — often taking time to comment on them. I would end up taking chemistry, physics, four years of math and English and two years of Latin not just because I was told it would be good for college but because I found them new and challenging — but I was never sure if it was the teacher or the subject that enticed me most.

Despite the appeal of the academic side, athletics would be the principal focus of most of my high school days. As in most western Illinois towns at the time, students did not concentrate in one sport all year the way they do today but participated in a different one each season. I managed to make varsity in both football and basketball my sophomore year and would attract college coaches' attention in both in my junior year. I participated in track as my off season conditioning sport — concentrating on the high jump and hurdles which seemed good for basketball and allowed me to avoid distance running (too lazy) and dashes (too slow). But it was in basketball that I began to see my way to college. After a particularly good junior year when I set school scoring records and led our team to the upset of the top ranked team in the state in the regional round of the state tournament (we would eventually get beat), I received scholarship offers from two Big Ten

schools — it was before the large city schools would come dominate basketball with players both much taller and faster! The prospects of becoming a high school teacher and coach seemed just around the corner.

However, fate intervened. The summer between my junior and senior year I suffered a severe ankle sprain which would never heal properly (two years later I would have it artificially fused by inserting pins to immobilize it). My senior year I did not play football and hobbled through the basketball season. Needless to say the athletic scholarships dissolved and my senior year was one where I would find new activities that began to reshape my early thoughts of a career. Fortunately two members of the faculty who had never been part of my experience intervened. Ms. Santee convinced me that I should join the men's glee club since she thought I had a voice worth cultivating. What she did not know was that I could not read music or carry a tune to save myself. But I was placed next to my old friend Bill Colby who was musically talented and had an excellent bass voice and told to just follow him. It worked well as our Men's Octet received a top rating in the state music festival. At the same time Mr. DeHaven, the drama teacher, invited me to come to some of their events. It did not take much convincing since I knew they had some of the best parties. This eventually led to an audition for the senior class play in which I would get the lead role. The irony is that it was titled "One Foot In Heaven" — I would get my ankle out of the cast the day before the weekend on which the play was performed. And I would end up back in the cast a week later when things went awry. More importantly through these activities I met and got to know personally a group of classmates with different interests who were only distant names before then.

With a Big Ten scholarship and the notoriety of college sports to provide an entry into coaching and teaching gone, I began to contemplate a different path to college if not a career. Several of my good friends in the class ahead of me had gone on to private liberal arts colleges. One had gone to DePauw University in Indiana and was particularly eager for me to come join him. For once my independence again kicked in. While he was my best friend, I was not sure continuing to follow him was the best route. Several Geneseo residents had links to different midwestern colleges and sought to interest me in them with the assurance that I could probably get an academic scholarship (I would end up being second in my class). But it would be one of those serendipitous events that provided the next opportunity and choice. While setting in study hall (yes, we had required study halls), Mr. Paxson — now the principal — appeared and approached four of us. It seemed a college recruiter

from an eastern college had come to visit and the principal's office had dropped the ball and forgotten to advertise it. Mr. Paxson needed some of us to come talk to this admissions officer from Trinity College in Hartford Connecticut. Anything to get out of study hall seemed good to us, so we obliged. I had never thought of a college outside the Midwest but was curious. It turned out Trinity had an endowed scholarship program for residents from Illinois and most applicants were from Chicago area schools. I would find out later that this visit was part of Trinity's attempt to tap the potential of those small towns which sent significant portions of students to college and where the likelihood for competition from other eastern ivy schools would not be so intense as in the Chicago area.

The long and the short of it is that I applied just because it seemed intriguing and I had never been east of Chicago. In fact the only time I had been that far was when we shipped cattle to the Chicago stock market and rode into the city with them in the trucks. A couple of months later I received notice of admission and an offer of one of these fellowships. When I called to inquire about the conditions of the fellowship, I was informed that the amount was per year — not for all four years as I had assumed. It seemed like a great deal of money so I accepted on the phone. Only after I arrived on campus in the fall would I learn how expensive an eastern private college really was. Clearly the path to high school teaching and coaching was fast receding but I had no idea where this was heading — except that it seemed like a great opportunity to see a new part of the country and that it was going to be a challenging collegiate experience.

#### COLLEGE AND MBA DAYS: NEW CHALLENGES AND THE BEGINNING OF A REAL CAREER SEARCH (1956–62)

##### *Trinity College*

Aside from conversations with friends and limited advice from teachers, this would be my first introduction to the world of higher education. I had no idea what a private liberal arts college in the east was really like. I only knew that since my parents took the first vacation in their life and drove me from Illinois to Hartford, it was important to them as well. Not only did I not know what a private liberal arts college education would be, I had no idea what a prep school was — and over half my classmates had graduated from one. When we arrived on campus, I was filled with excitement and apprehension. I had taken the

advice of my high school friend who had tried to entice me to DePauw University and not purchased many college clothes. Instead I saved my summer construction money and planned to buy a wardrobe when I arrived. He was right. I had had no idea what would be worn, but after the first week I managed to get an idea and bought enough to get me through the semester and not look like the midwestern small town nerd that I was.

Several factors conspired to make the transition less difficulty than I thought it would be. As we began to unload the car, the first adult I encountered was the admissions officer whom I had met in Geneseo. He remembered my name and made me and my parents feel at home. My roommate turned out to be from a working class family in Brockton, Mass. and had some of the same uncertainty I did about fitting in at an institution where we were clearly from the lower socio-economic class. Despite very different public school experiences and different accents, we would become good friends. During Freshmen Week there was a traditional picnic with all types of activities designed to get class members acquainted and to begin the process of building class identity (Something I would later learn was part of most small college's socialization process). Trinity at this time had been one of the top ranked NCAA Division III football teams the prior year and took it very seriously. My class was full of jocks. One of the big events of the picnic was a very intense touch football game. I managed to score six touchdowns on the receiving end of passes from a quarterback who had been on an All New England Team in prep school. This would bring interest from coaches who wanted me to play. But my injured ankle was still not fully healed so I declined and waited for basketball season. Suddenly I was known in my class — shades of my high school arrival from the farm.

On the academic side, deciding what a liberal arts college curriculum was turned out to be simple — most of the first two years consisted of required courses. Taking those and electing things I liked in high school — calculus, physics and chemistry — and then one engineering course required little thought of what career path this would lead to. Ultimately I would follow a path of least resistance and major in engineering and math. I also discovered that being an Illinois Scholar was a mark of distinction. The eight to ten students admitted each of several previous years had done remarkably well. While we were rumored to be farm boys, we were at least known for being bright ones — both by the faculty and by the student grapevine. So by the end of the first couple of weeks, I had clothes that fit in, knew most of my classmates, had an athletic and academic reputation and was busy studying like

everyone else. I was even elected vice president of my freshman class. I was being introduced to college life — the arena of my future life's work. College was going well, but a career was still not on my mind.

The remainder of my undergraduate days progressed successfully as the first semester had done and contained little reflection of where it was taking me. I proceeded to major in math and engineering. Math and science courses were extensions of things in which I had done well in high school and enjoyed. Since the high school teaching and coaching route had receded as a possibility, engineering was the only other arena of well-paid work (I did not think of it as a career) that I had experienced in Geneseo and seemed imminently practical. I even spent two summers during college employed in the engineering department of John Deere and Co. — one of the prominent farm equipment employers in my home area. Academically I continued the high school pattern of focused hard work that paid off with good grades — I would make Phi Beta Kappa as a junior. My freshman year experience with sports was also rewarding. I was a starter and one of leaders of our freshman team that did well and included wins over Ivy League schools such as Dartmouth and Yale to whom we usually lost. But the high school ankle injury would re-emerge at the end of my first year and lead to an operation that closed off any more competitive college sports. With new clothes and recognition from faculty and my class for both athletic and academic endeavors, I began to feel comfortable and found I could fit into the eastern private college scene.

That allowed me to continue the lesson that life should be fun. Despite the isolation of living at a men's college without a car, I found an active social life in a fraternity. And as in high school I continued to find time for student organizations, most notably student government where I became class president for two years, president of the student senate and was tapped by Medusa! The latter causes some shudders about college life in the late 1950s. Medusa was a self-perpetuating student organization in which juniors were "tapped" by the outgoing senior members of Medusa to serve the following year. Medusa's function was to be the student judiciary for student life and infractions. It was an attempt to make students responsible for student discipline. In effect we were judge, jury and executioner for most all significant student infractions. It was these roles that would first bring me into contact with major administrators of the college (the Dean of Students, the Academic Vice-President and the President) and discussions about issues of college policy and governance. They would become critical in my

next choice and as models for what a career in higher education might be.

Based largely on my academic performance, a number of faculty members reinforced the notion that I should continue in graduate school. That idea appealed to me since I did not really know what I wanted to do. (My sisters would accuse me of staying in school to avoid work.) The obvious choice was to continue in engineering. Armed with recommendations from several faculty members who were alumni of M.I.T and Cal. Tech., I applied and was admitted to both to study nuclear engineering. But midway through my senior year in a rare moment of reflection, I realized this meant at least four more years of heavily laboratory-oriented graduate education and probably would be true of the work itself. But I had grown to detest labs. So I went to see my friend Bill Lacy, Dean of Students, whom I had come to know very well. He was a good psychologist — but not the non-directive type. He said he was not surprised and suggested that I might consider graduate school in business administration since I seemed to enjoy organizational activities, was good with people and it would be a good combination with my engineering background. I weighed his advice for at least a day or two and then, with the support of a different set of faculty members, proceeded to apply to graduate business schools.

My choice was quickly narrowed to Stanford and Harvard. The rationality of the choice was not clear at the time but is in retrospect. I looked at the admission letters. The one from Stanford (and I paraphrase) said something like “40 miles from San Francisco, 35 miles from the Pacific Ocean and 180 miles from Squaw Valley, lies Palo Alto and Stanford University.” Clearly either Harvard would be the more challenging — or else I knew I would follow my proclivity to have fun and not study much at Stanford. Once again an unplanned fork in the road had provided a new opportunity, a set of challenges, a choice and the need to develop a new set of competencies if I were to succeed. My career path was still not clear but I had come into contact with the world of higher education, knew a bit more about faculty and administrative life and was about to study something having to do with organizations and management.

#### *Harvard Business School*

Not unlike my entry into high school and college, I was to discover a whole new environment and culture. I arrived in Cambridge with little



idea of what a career in business was much less what becoming a captain of industry, an entrepreneur or a corporate leader entailed or meant. But I liked the idea of being in Boston and Cambridge and attending Harvard. Clearly I was headed somewhere. The reality set in very quickly. I was one of only 10% of the new MBA students who came directly from undergraduate school. Most had at least 3–5 years of experience but usually much more. They were committed to a career in business — often the area in which they intended to rise to the top — and they were highly competitive. Classes were conducted in the case study mode where analysis, confident presentation and aggressive argumentation rather than text book studying, learning, problem solving, and guided discussion was the classroom style. Fortunately I was in a dormitory suite with three other students fresh from undergraduate school as well, so we could share our relative insecurity and frustration at this new teaching, learning and reward system. We were all well educated and high performing students with strong egos who found that, while we lacked some of the real world experience and focus, we could none the less hold our own in presenting carefully thought out arguments — particularly on written assignments.

We would learn to fit in and perform well academically but the degree to which we developed our dedication to and focus on a business career varied. I would come to learn and understand the underlying techniques in courses like marketing research, financial analysis and production management and come to appreciate various approaches to planning, management, personnel administration etc. However, I never found an area of business in which I wanted to make my life work and certainly never became imbued with the drive for personal economic benefit or power that many of my classmates had. This would become most apparent when I began interviewing for jobs in the second year of the program.

Grades, references and well-crafted statements of interest got me interviews at some of the more desirable firms of that era: Proctor and Gamble, Owens-Corning Fiber Glass, Inland Steel, Ford Motor Co., McKinsey and Co., Marshall Fields and Avis Corp. Positions varied from marketing, to production, to financial analysis, to consulting, to retailing. It does not take a genius to look at that list and see I did not have a focus. More importantly I found I could never really get excited about any of their products — soap, glass, steel, cars, trucks and clothing. To break the mold I became one of a small number of students who signed up for the school's innovative attempt to place students in new start up companies. I was invited by one to come to their facilities on the west

coast. I immediately accepted the offer as I had still never been west of Iowa. I had a whirlwind trip from Boston to Palo Alto and spent a day touring two small plain brick buildings in which women were wiring widgets. I heard about their softball and volleyball games in the courtyard (dirt covered field) between the buildings; the house on the Pacific that one of the founders had and the one the other had at a new ski area, Squaw Valley, that were available for workers to use; and was given \$100 at the end of the day to go to San Francisco to enjoy dinner and have an extra night on the town. I returned to Boston and two weeks later received a letter offering me a job. The only information was the title and the salary — no particulars about benefits, training, or responsibilities. Another friend of mine had a similar experience. We both decided it was not a good risk and declined. The initials of the last names of the two gentlemen whose names appeared on the offer letter were “H” and “P”. We would have been the first members of a management team. This was clearly an opportunity which presented a challenge and the choice that would have led to very different career trajectory.

Another serendipitous event intervened. During final exams in the last term, I suffered a ruptured appendix and missed all the exams. When I went in to see the Assistant Dean handling such matters, he asked about my plans. I said I did not have any firm ones. After a fifteen-minute conversation, I was offered a position as an Assistant to the Dean. The starting salary was half that of the rest of my classmates but it sounded intriguing. I observed that it may have been offered because they did not want to have an unemployed graduate. It was the first firm choice that would set me on a path to work in higher education.

## DISCOVERING HIGHER EDUCATION: FINALLY, A CHOICE

### EXPLORING ADMINISTRATION AT THE “B” SCHOOL (1962–66)

My four years on the staff at the Harvard Business School would provide the opportunity to finally explore what a career in higher education would be like. My first supervisor, an Associate Dean, had been Dean of Students at the University of California at Berkeley. He was a superb administrator who handled an array of curricular, admissions, public relations and faculty and student issues with great sensitivity, insight and respect for all involved. He provided me with a variety of experiences, a constant stream of good advice and encouragement to consider a career in higher education administration. For the first time

I began to think in terms of a career — not just a job — and of all places in higher education where I had already spent six years as a student.

After a year in a supportive role, I was made an Assistant Dean, which meant I had specific responsibilities and an adjunct faculty appointment. My primary responsibility was to direct the recruitment and admission of a class of 700 new MBA students from all over the world (we processed over 7000 applications). This entailed developing a marketing plan and working with several other staff members to recruit nationally; directing a staff who processed applications, transcripts, test scores, references etc.; overseeing the selection, notification and financial aid process and assuring a smooth matriculation process. As an adjunct faculty member, I was considered a member of the faculty group who were assigned to two of seven sections of new MBA students for whom I was the primary counselor. I also was a member of the Dean's Cabinet which dealt with various academic management issues and matters related to developing a strategy for a large professional school in a major private university. It was challenging and an experience that for the first time felt like a place I could make a commitment.

Several things shaped my views of this emerging career area. As an Assistant Dean with access to the Dean's Cabinet and a sizable admission support staff, I found myself in an enviable position.

When issues would come up in the Dean's Cabinet that seemed to require some further study, I would volunteer. The admissions staff was made up of very bright young, college educated women who had been looking for an interesting place to work in Boston. Admissions work was routine and had fluctuating work demands — peak periods and slow times. They would eagerly join any effort to address some of these studies. We quickly developed the reputation as an analytic source for studies of all kinds of issues. Without knowing it, I was engaging in institutional research — a sub-field of higher education that I would discover later. Working with a doctoral student in the school's information and computing area and my admissions office staff, we developed a computerized database, a mainframe program for keeping track of all applicants and a system of continuous reports so admissions officers could immediately respond to applicant inquiries about the status of their application. In this area I was working with some of the early issues in developing management information systems for higher education.

But the work involved more than just internal management. As an Assistant Dean in a school that prided itself on relationships with the

larger business community and with a Dean who took external relations and fund raising seriously, I was often expected to attend two or three functions per week with alumni, business leaders, and potential donors who represented both the national and international world of commerce and government. Without having a name for it, I was getting my first lessons in advancement — constituent relations, public relations and fund raising. Another significant strategic change involved a very controversial issue in Harvard academic politics. Harvard offered the MBA program for men only through the Business School. Radcliff College, at that time still separate from Harvard, offered a highly selective one year post-graduate certificate program in business administration for women which was taught mostly by Business School faculty but had the Radcliff name on the certificate. Mary Bunting, the President of Radcliff, and George Baker, the Dean of the Business School, supported a plan to open admission to the MBA program to women and to phase out the Radcliff certificate program. Needless to say there was extensive resistance both from Radcliff alumni who saw it as a loss of stature for Radcliff and from the Business School alums who saw it as diminishing the MBA program's value. There were calls for the resignation of both and serious questioning when the changes were presented to the trustees of the two institutions. I would learn about the difficulty of making strategic decisions to redirect an institution long before I started teaching strategic planning and would gain some lessons about power and conflict long before reading Vic Baldrige's book on the topic several years later.

During this period on the Dean's staff I would also explore an academic career by beginning to take courses in the D.B.A. program at Harvard. But I was struck by the irony that I might end up teaching in an area — business administration — that I had found uninteresting and in which I had declined to work. I knew that, despite the excellent experience working in the Business School, there was no long-range career here for someone who only had an MBA so I began to explore other options for doctoral work. If I wanted to make a significant career in higher education administration, one message was clear — I should have a doctoral degree. During my MBA days my interests had been piqued by the study of organizational behavior — an area that was rapidly developing in the 1960's. I explored a variety of options, but it would be another of those unplanned, serendipitous events that would open a new alternative and opportunity. While lunching with a friend at the MIT faculty club after playing tennis there, he introduced me to Prof. Robert Kahn from the University of Michigan. He was on sabbatical at MIT, was one of the gurus of organizational behavior and had just

finished with Daniel Katz their classic book, *Social Psychology of Organizations*. I had learned of the relatively new Ph.D. program in higher education at Michigan from an assistant dean at the Business School who was my predecessor and had gone there. I also knew of Michigan's emergence as the epicenter of graduate study and research on organizational behavior. But it was Professor Kahn who suggested that, unlike my other alternatives — again Harvard and Stanford (I had decided I was now mature enough to actually study at Stanford) — I could integrate both at Michigan. As a result of that meeting I applied to Michigan, received a fellowship and set off to combine the study of organizational behavior and higher education.

#### CHOOSING TO STUDY HIGHER EDUCATION (1966–68)

I arrived in Ann Arbor on a hot August day not unlike the one on the football field in Geneseo where I had met Bill Colby and was beginning to wonder why I had left the banks of the Charles and Boston to return to the Midwest. But it would only take three days to discover a higher education mini-community that would become a primary source of support and inspiration and assure me that I had made a good choice. When classes began, I encountered probably the worst class/professor (name deleted to avoid slander) in my academic life. At the end of class someone suggested we go to the Brown Jug for coffee. As we shared our equally negative reactions, we also discovered we were all Ph.D. students in higher education taking a required School-wide non-higher education course. A bond was formed and we became the Dirty Dozen. We were a diverse lot from many different graduate fields (law, business, engineering, history, theology, psychology, mathematics), with experience in a wide array of higher education settings (national higher education association, research university, community college, public state university, private liberal arts college, professional school, state agency) and in a variety of functions (academic administration, student affairs, development, faculty, admissions, financial affairs). But we all shared a strong interest in some aspect of higher education and the issues of the day. For the next two years we would become a cohort who challenged everything, pressed the faculty to expand and make their courses more substantive and critiqued each other mercilessly. But we were also a supportive professional group who provided constructive advice and knowledge of many aspects of higher education not covered by the faculty or in texts. We were also became good friends who went on to

successful careers in higher education and some are names that you would all recognize.

Later that year I would discover another mini-community. In Bob Kahn's course on organizational research I would meet a group of graduate students from varied departments (psychology, sociology, public health, economics, political science) who shared a common interest in the study of organizations from their own disciplinary or professional perspective and who valued the interdisciplinary approach stressed by the organizational faculty. In our second year we would band together, identify several advanced graduate seminars in diverse fields that we thought would be useful and then negotiate as a group with the faculty member to let us enroll even though we were usually not majoring in that area. In addition to courses with social and organizational psychologists Robert Kahn and Rensis Likert, we took a political conflict seminar from a young assistant professor, William Gamson; an open systems theory seminar from economist Kenneth Boulding; a seminar on organizational change from psychologist Floyd Mann; a social systems theory course from sociologist Howard Kelman before he went to Harvard. It was a true academic community of students who were creating their own view of organizational behavior just as the field was exploding.

The Center for the Study of Higher Education, of course, would serve as my primary academic/professional home. Here the doctoral program was still taking shape and, as graduate students, we were able to influence it. The Center faculty provided a rudimentary core of work that is standard today. James L. Miller, who had just replaced Algo Henderson, the founder of the Center, brought his political science background and state agency experience to bear on understanding the public policy and economics of higher education. James Doi, my mentor, used his University of Chicago sociology background, his experience working in a state agency, and his rapid fire enthusiasm to force us to think in theoretical and conceptual terms about how institutions and agencies were organized and managed. Robert Blackburn, a new member of the faculty, brought his University of Chicago science education and experience as an innovative college dean and forced us to think systematically about how faculty work and careers were structured and how the organization of the curriculum evolved. John Brubacher, a Yale trained lawyer with a Ph.D. in philosophy, used his own incomparable form of Socratic dialogue and challenged us to come to grips with our own views on major higher education controversies and issues of the day and to shape our own philosophy of higher education. As a result of student interest, Gerald Gurin, a social psychologist who had studied under Theodore Newcomb and was a researcher at the Institute for Social

Research (ISR) at Michigan, was added to the faculty to teach courses looking at student development, the impact of institutions on students and student activism and to bring more quantitative rigor to the faculty. The Dirty Dozen also successfully lobbied against a decision to hire two new faculty members on the ground that they were too practitioner-oriented. In retrospect both were probably bad decisions. Both candidates went on to have excellent scholarly careers studying higher education. As students we did not have the foresight to see the capacity of people to continue to grow and reshape their careers.

The faculty also provided an entry into an emerging professional world in higher education. Students were encouraged to attend the annual meeting of the American Association for Higher Education which many alumni of the Center attended. AAHE was then primarily an administrative association addressing management issues. Current students would meet and network (we did not use that term then) with alumni. Since the Center had initially emphasized a post-doctoral training program for administrators in the rapidly expanding higher education world, many were presidents, vice-presidents and deans. It was here that I also discovered the precursor to ASHE — a Sunday afternoon meeting of professors of higher education representing the early programs and centers. Some of the faculty from other programs would bring a few of their graduate students as well. It was here that I met some of my neophyte academic colleagues like Larry Leslie, Ken Mortimer, Ann Morey, and others. More importantly since this was a very small gathering (perhaps 50–75 people when I first encountered it), I met and got to know faculty from other emerging programs whose names were all well known to us — Robert Berdahl, Lyman Glenny, Mary Corcoran, Lester Anderson, Hal Cowley, Burton Clark and others. The faculty treated students from other programs as they would their own. It was a glimpse of the academic professional community that was not yet well formed.

The flexible and emergent nature of the field and programs during this early period is difficult to transmit today when curricula in higher education programs have become more comprehensive and structured. Not only did the Dirty Dozen impact faculty hiring, we also created our own seminars (under faculty sponsorship), invited guest speakers and created cross campus communities of faculty and students to address current issues like student activism. In fact it is the result of these dynamics and some external funding that led to another serendipitous event in which my academic career in higher education has its genesis. At Michigan I had received a U.S. Office of Education fellowship intended to train institutional researchers for higher education. This introduced me to an emerging administrative specialty — institutional research.



That grant supported several students and also provided money for speakers and student travel. One of the funded speakers was Dr. Alan Carter, an ACE fellow who would become academic vice-president at New York University and later a Professor of Higher Education at UCLA (more on him later). During the same year several students became interested in the rapid increase of mergers among higher education institutions and proposed a seminar on the topic to Dr. Doi who was the Institutional Research grant director. The seminar included a trip to four institutions that were undergoing or had undergone merger. One was the State University of New York at Buffalo where Warren Bennis, a noted organizational scholar, was vice-president of academic affairs. As a result of Dr. Carter's speaking engagement at the Center and our visit with Dr. Bennis at SUNY-Buffalo, I was offered positions working for each of them. Simultaneously I had been offered a position as Director of Institutional Research at the University of Colorado. My administrative career in higher education was about to be launched.

Mountains prevailed over the SUNY and NYU offers and I accepted Colorado. It was all done verbally — that was not unusual then. Two weeks later I received a call from Colorado informing me that they had decided to give the position to an earlier candidate who had changed his mind — but they would still offer me a position as assistant to the academic vice-president. I, of course, had already declined the other offers. I was very upset and in a self righteous fit, chose to decline the Colorado offer. As at the end of my MBA, I was about to be unemployed. Shortly thereafter I was summoned to meet with Dr. Doi and Rensis Likert, then director of Michigan's Institute for Social Research. They had combined to offer me a joint appointment as an assistant professor in the Center (provided I defended my dissertation before the end of the year) and an assistant research scientist at ISR. I would teach a course at the Center and work on a research project redesigning some of Dr. Likert's organizational instruments for use in studies of higher education. It was another unplanned choice but this time an academic/research position not the anticipated administrative one. At least I was now clear that I was employed and that my "career" was probably still in higher education.

#### THE RELUCTANT ACADEMIC: A TENTATIVE COMMITMENT AND SEARCH FOR AN ACADEMIC COMMUNITY (1968–72)

I looked forward to this appointment since I had grown to respect and admire both Prof. Doi and Dr. Likert and had developed an interest



in studying higher education from an organizational perspective. But that could also have been done as an institutional researcher. I saw this as an interim arrangement. It was an opportunity to put the finishing touches on my dissertation and defend it in a more relaxed fashion — perhaps even write an article about it — and to have an academic teaching/research experience. The desirability of having an academic experience had been reinforced by my student and faculty colleagues at the Center, but I was still anticipating an administrative career.

Despite my experience working with faculty at the Harvard Business School and my collegial relationship with faculty in my Michigan doctoral work, my years as an assistant professor were spent learning about academic life and gaining new competencies in the role of a faculty member. It would be intensified at the end of the first year when Prof. Doi left to become Dean of the School of Education at the University of Rochester. While sorry to lose one of my key mentors and supporters, I benefited from the opportunity to inherit his courses and to replace him as project director on the USOE grant to train institutional researchers on which my doctoral work had been supported.

While the instrument development work with Rensis Likert never culminated in the research on higher education management style that was intended, my experience in ISR provided a more in-depth look at both organizational research in which organizations were the unit of analysis and at how large scale research projects were initiated, organized and administered. It would also lead to future work there. Within the Center inheriting the USOE sponsored IR Training Grant provided funds for travel, an early opportunity to become familiar with government funding patterns and procedures, connections with others around the country interested in fostering research and research training in higher education and a group of very able doctoral students with whom to collaborate. In fact my first formal research proposal funded by NSF was a joint effort with a graduate student in 1971 on “Organizational Adaptability in Selected Small Colleges.”

On the teaching side, after Dr. Doi’s departure, I took over his higher education courses on Organizational Behavior and on Institutional Research and Planning, designed my own on Administrative Behavior and began to develop cases for a special case study-based course on higher education management. Equally as important as the teaching experience and course identity, I was learning to work with students as colleagues. I have already noted the varied skills, knowledge and abilities of my own student cohort. Harnessing student efforts by engaging them in small class-related research projects, in designing special seminars for

the IR trainees, in writing cases for the emerging case studies course, in making conference presentations and in designing research proposals effectively increased my productivity and, I like to believe, enhanced their learning. This lesson would continue throughout my career — even on large-scale national projects later in my career.

On the professional side new professional communities would be identified and come to be central to my later career. I had the good fortune, when the informal professors of higher education group from AAHE decided to become a separate Association for the Study of Higher Education, to be part of a planning group meeting — not because I was central but because it was held in Ann Arbor and I was invited to the discussions. ASHE would soon become my academic home as both it and my career were emerging at the same time.

As a result of the IR Training Grant that had supported my doctoral work and for which I became project director, I was expected to attend the meetings of another small nascent organization, the Association of Institutional Research. I attended first in 1970 which was only their 10th conference. AIR and the Society for College and University Planning would become my two more administratively oriented professional communities throughout my career. Attendance at SCUP had been at the urging of Prof. Doi who noted that, with the rapid growth and expansion of US higher education during this period, planning in all areas — academics, finances, human resources, campuses and facilities and public policy — were all critical and this was the only professional association that focused on this important function and dynamic. AERA's Division J, focusing on postsecondary research, would not be formed until much later. I came to value the linkage to these professional communities which represented the academic, research, analytic and administrative side of higher education.

Although consulting was never a major focus, early involvements examining governance for the trustees at Antioch College, assisting in the design of a new public institution (Florida International University), evaluating executive committees at a major research university and writing cases for a SCUP management training seminar all served to keep some of my work grounded in the reality of higher education. They also would begin to foster an interest in and the development of my ability to relate to administrative leaders and policy makers around issues of system and institutional design, reorganization and improvement — activities I have come to value over my career.

And, of course, in the context of a major research university the need for an assistant professor to emphasize a scholarly contribution was also made quite clear. Two early grants from the USOE and NSF

were considered laudable and launched me in this activity. Conference presentations were made at AAHE, and early meetings of ASHE, AIR and SCUP. Publications reflecting my organizational training began to emerge on topics dealing with decentralization, decision-making, planning, institutional research and policy formulation. One event in this area reflects the growing press to develop a more scholarly and conceptual approach to our emerging field of higher education. Bob Silverman had been selected as editor of the *Journal of Higher Education* and was determined to change a rather mundane, practice-oriented journal into a stronger conceptual and more research oriented one. He received a small grant to do a special issue of the *Journal* on governance, asked several new higher education assistant professors to prepare scholarly papers on assigned topics, and invited us all to Airlie House in Virginia for a symposium to discuss our papers with scholars from the disciplines. We arrived to find that our discussants — actually critics — were eminent sociologists, economists, political scientists, and organizational psychologists such as James March, Talcott Parsons, Aaron Wildavsky and others. It was a humbling experience but a sign that the bar was being raised, not just for the journal, but for the field.

Despite the tentative and unplanned decision to enter the professorate, I had learned a great deal about life as a university professor and about our emerging field. Most importantly I had clarified my focus on the study of higher education. It would be from the perspective of someone with an interdisciplinary base in organizational behavior — itself still an emerging area. My interest would be in the nature of colleges and universities as organizations; their structure, governance and management; the processes of planning and institutional research; their culture; and the dynamics of organizational improvement and change. How institutions and systems anticipate, respond to or deal with critical new external pressures and challenges would remain a primary interest. The topics and issues studied during my career would change as our world of higher education changed. I had also learned how to link the areas in which I taught to the focus of my scholarly interest and how to start with critical topics and ideas, develop them into projects, use presentations to test the results of those projects and then refine them for publication, other modes of dissemination, and teaching.

#### MAKING THE COMMITMENT, EXPANDING COMPETENCE AND STARTING TO CONTRIBUTE (1972–76)

Four years as an assistant professor still had not extinguished my interest in an administrative career so I interviewed for several positions

ranging from institutional research, to planning, to academic administration, to director of a new state coordinating agency. But I was convinced by my colleagues that it would be better to stay until I received tenure and then to have that as bargaining chip when applying for administrative posts. Fortunately in the spring of 1972 I received a favorable review and spent the next four years as an associate professor.

Joseph Cosand, who came to the Center as director in 1971, would be a great influence in my decision to continue. Joe had been the founding president of the St. Louis Community College System, was a member of the Carnegie Commission on Higher Education, became the first community college president to be elected president of the American Council on Education and — after his term as Center director — served as Assistant Secretary for Postsecondary Education in the Nixon administration. Joe did not seek this latter role as a political activist but had been nominated by leaders of some of the national higher education associations. He accepted that role out of a good Quaker sense of duty. When his presidential colleagues urged him and the President of the United States called, Joe said simply — “you have no choice but to go.” Joe was not a person to whom it was easy to say no and I knew it would be an interesting time at the Center under his leadership. It was. He had a constant parade of national leaders on campus and always involved the faculty and students with them. He helped promote faculty activities and projects with his many professional and foundation contacts. He made the Center the locus of discussions about national and state issues on campus. He was not a researcher but valued good research and pressed the faculty to make their scholarly activities meaningful in the real world. I knew I would learn from him and benefited from his assistance and guidance.

This period as an associate professor would turn out to be a highly productive four years. While teaching assignments did not change significantly, my professional activities in ASHE, AIR and SCUP would all develop rapidly. I served on or chaired committees in all of them. By the end of this period I had served on or was serving as a member of the executive committee or board in all three. I had over 20 publications — journal articles, chapters and books or monographs. The focus tended to be on the nature of institutional research and of planning, on the influences of information technology, on how changing state level approaches to resource allocation impacted institutions and on the status of organizational and of administrative theory and research in higher education.

The major event of this period is my introduction into the world of large-scale sponsored research. In 1974 Zee Gamson, Bob Blackburn

and I received a large grant which I directed. It was from the National Institute of Mental Health to study the “White College and Universities’ Response to Black Students.” This was shortly after the intensive disruptions over racial issues on many campuses in the late 1960s and early 70s. It was an attempt to understand what happened when predominantly white campuses significantly increased their black student enrollments which many had done in the early 1970s. The study involved quantitative and qualitative examination of national data on changing patterns of institutional enrollment, intensive comparative case studies and surveys of faculty, students and administrators. It was housed in Michigan’s Institute of Social Research, where I was an affiliated faculty member and Research Program Director. In addition to the faculty, we used a team of racially diverse graduate students most of whom did dissertations that were based on the research. The study resulted in a book, *Black Students on White Campuses: The Impacts of Increased Black Enrollment*, which was widely cited in the years that followed.

This was activity in which I really learned to write large grant proposals, work with a federal agency, direct a team of faculty and student researchers, oversee the study itself and assure that it becomes more than just a technical report — lessons that would be useful throughout my career. More importantly we learned a great deal about how to study a controversial, highly sensitive social issue while working as a racially mixed team. These lessons were reported in a chapter in the book. The book was also at least partially responsible for my continuing to stay in a faculty role. I was once again persuaded that since I now had tenure, I should stay and seek promotion to full professor which would be an even better negotiating chip than Associate Professor. The clincher was in 1976 when Joe Cosand accepted his appointment as Assistant Secretary of Postsecondary Education and went on leave. The faculty asked me to become Director of the Center — allowing me to fulfill that latent interest in an administrative experience while becoming ever more committed to an academic career in the study of higher education.

#### COMMUNITY AND CONTRIBUTION: FINDING A BALANCE (1976–1996)

BUILDING A BALANCED CAREER: BRIDGING THE ACADEMIC,  
ADMINISTRATIVE AND ANALYTIC

This twenty-year period opened up many new opportunities and challenges which would greatly add to my repertoire of competence and

underscore the fact that a career commitment had finally been made. The communities in which I would make my contribution also would become apparent. It was two decades of seemingly disparate and intensive activity. It was not until the end of this two-decade period that I was able to make sense of it. Rather than becoming the traditional scholar or the full time administrator, I was both seeking and building a balanced career — bridging the administrative, the academic, and the analytic worlds of higher education. As Center director, I would run the gamut of administrative issues in higher education albeit in a small microcosm and have many opportunities to interact with senior administrators. In my faculty/scholarly role my own research and teaching interests would reflect all three worlds. My studies and courses dealt with applied organizational and administrative issues, analytical institutional research concerns and conceptual and theoretical issues in organizational behavior. In a sense these reflected my somewhat peripatetic academic background: I brought the rationality of engineering to bear on institutional issues through my work in institutional research, the study of organizational behavior had stressed the conceptual and theoretical development which I applied to higher education and my own student and external activities and study of higher education provided both practical and academic study of administrative matters. Even my professional involvement in ASHE, AIR and SCUP were each respectively academic, analytic and administratively oriented professional communities. Some elaboration of the administrative role as Center director, my scholarly activities and my professional involvements during this period may be useful.

#### CENTER DIRECTOR: BUILDING AND SUSTAINING EXCELLENCE

The Center changed substantially over my twenty years as Director. Those changes can be identified in four periods, each of which presented substantial administrative challenges and resulted in changes at the Center.

##### *Celebration and Redirection (1976–1980)*

When I became Center director in 1976, it was already well regarded and possessed a history of contribution to management development of college and university senior executives through its early emphasis on postdoctoral training. But it also had acquired a well known faculty who

had made significant contributions in administrative and policy leadership posts, had produced significant early scholarly and applied books on higher education, and instituted one of the early doctoral programs known for training administrative and policy leaders. But both the faculty and the times were changing. The early founders of the Center who were significant contributors to the emerging field like Algo Henderson, John Brubacher, Norman Harris and others had already retired. In 1976, the Center consisted of seven regular faculty members: Joe Cosand was widely recognized for policy and leadership issues in higher education; James L. (Jerry) Miller, Robert Blackburn, Murray Jackson and Gerald Gurin were emerging as important contributors to the field; Zelda Gamson and I were the neophytes. In the next twenty years the Center would both maintain its tradition of excellence and leadership but undergo significant change and grow to twelve regular faculty members by 1996.

In my first two years we held a celebration and embarked on a rather serious self-assessment and planning effort (neither program review or academic planning were common then). We knew there had been a significant change of the faculty guard as the founders retired. So we held a two day conference hosted at the Barat College campus in the Chicago area right before the annual 1977 AAHE conference. It both honored the early faculty and highlighted the new ones. Over 140 current and former faculty, students and alumni attended.

We then returned to examine, as objectively as we could, the reasons for the Center's past reputation and visibility; the quality and capability of our current faculty, program and activities; our distinctiveness; the rising competition from the many emerging strong early centers and programs; and the needs and demands of the field of higher education. We concluded that one of the Center's past strengths in executive and management development and in professional in-service training for higher education administrative leaders and policy makers should be de-emphasized in favor of greater emphasis on more rigorous graduate training for degree students (especially at the doctoral level) and of more concern for research and conceptual development in the field. The demand for these earlier activities was increasingly being met by professional associations in higher education who could do that more effectively and more efficiently. We also concluded that we should place greater emphasis specifically on strengthening the academic and scholarly nature of the Ph.D. Program, expanding a nascent masters program and obtaining research funding. These became the highest priorities. In the nineteen years between the Center's founding in 1957 and 1976, the



Center had received 12 grants (many quite large), but all except the 1974 grant from NIMH to study the Impact of Black Student Enrollment (already noted) were primarily for training and development grants. In the five years between 1976 and 1980 this core of seven faculty would receive eighteen grants from four different government agencies (Department of Labor, NSF, FIPSE, and NIE) and five different foundations (Kellogg, Lilly, Exxon, Ford and Spencer). All were either research-oriented or supported doctoral students. It was an exciting time. As director, I was doing what I taught: honoring tradition, engaging faculty in planning, redirecting our efforts and learning how to juggle research projects, teaching and administration in my own life.

#### *School Crisis and Refocusing (1981–1984)*

This period would not be so pleasant. In 1982–83 the State of Michigan was in a serious financial crisis and the University of Michigan's leadership — following the then in-vogue emphasis on “smaller but better” — adopted that as Michigan's strategy to address its budget shortfall. Unfortunately, due to a long history of expanding the School of Education on soft funding which was rapidly disappearing, little concern for faculty hiring and promotion standards, and lack of quality control in its graduate programs, the school was one of the first targeted by the University for review and potential closure or major downsizing. The process was both draconian and highly political so the Center's efforts turned to survival. We first had to appeal to the academic vice-president to get the Center's doctoral admissions exempted from the executive officers' decision to halt admissions to the School's doctoral programs. While the appeal was successful, it made us the pariahs among the rest of the School's faculty. Throughout the University's review much of my own and the Center faculty's time was spent providing both analytical and political support to prevent our being reduced and trying to convince our higher education colleagues in other institutions that we still existed. The review took an entire year, and, while highly critical of the School, was supportive of the Center as a model of what programs in the School should be like. The following year I spent fifteen to twenty hours per week in addition to my regular duties serving on a five-member committee appointed by the academic vice president to the task of designing a School with forty percent fewer faculty. This change was implemented in the third year of the process.

The positive thing is that in the redesigned School, the Center still



existed but with a modification. We were now the Center for the Study of Higher and *Postsecondary* Education. The rationale was that we would continue to emphasize our graduate programs and research but would absorb some members of an adult education program that was being phased out. This actually added five faculty to the seven previously noted. However, four of those retired shortly thereafter, leaving us with one additional faculty member, Janet Lawrence, who has been an excellent addition. We also used that change of name as an opportunity to examine how higher education was changing as a result of the new postsecondary emphasis and to revise the curriculum to reflect it. Another positive result of this was that Joan Stark, who had come to the School in 1978 as Dean and had to deal with the review, elected to return to the faculty in 1983. She had held an appointment with the Center since 1978 but was not active during her deanship years. We were delighted with this addition and it would soon pay dividends. Needless to say, I learned a great deal about administration in a period of intense conflict.

#### *Back On Track (1985–1990)*

During this period things began to return to normal. The program was actually strengthened by the rethinking that had been done. Joan Stark added immeasurably to areas of the program in which we had not been strong — most notably curriculum and assessment. This was particularly timely since the national issues in higher education were shifting toward academic and curricular issues and, of course, assessment. It was during this time that Kim Cameron also was recruited to the University by the Business School and we were able to add him as a joint appointment. The additions of Kim and Joan in this way were quite important since it was not a time we would have been able to add faculty — even to replace the former adult education faculty who were retiring. One of Joan Stark's major activities in her first year after her deanship was to generate a research agenda. The upshot was the successful proposal for the National Center for Research and Improvement on Postsecondary Teaching and Learning (NCRIP TAL) which she directed. This activity would involve many of the Center faculty and a large number of graduate students for five years from 1985–1990. As Center director I participated in the development of the proposal, headed one of the research programs under it and attempted to juggle the relationship among and between this major national effort and the Center's academic

program demands, other funded projects and the normal administrative routines of a center/program director. Life was as busy as the 1976–1980 era and much more enjoyable than the 1981–84 period.

*Reloading and Renewing (1991–1996)*

These years introduced a new set of challenges and organizational issues for the Center. While large grants like NCRIPAL provide a focus and support for many faculty and students, the end of such a project also brings a great deal of stress related to the loss of funding and uncertainty about what is next.

Between 1989–1991 we had also experienced the loss of six faculty members through retirement — three from the merged adult education program that we did not expect to be able to replace and three of our seven higher education stalwarts who were part of the group that I encountered in 1976. We took a lesson from the past. We held a celebration, a 35th Reunion and Recognition for the retirees. This time it was in Ann Arbor but again about 140 attended. We began faculty searches to replace the three long-time higher education faculty and were successful in hiring Eric Dey, Sylvia Hurtado, and Michael Nettles. So after departures, the three new hires and the addition of Joan Stark, Kim Cameron, and Jan Lawrence from adult education; and new joint appointments of Teshome Wagaw with the Center for African-American and African Studies and Constance Cook with the President's Office, the Center faculty of seven in 1976 had grown to twelve by 1996.

We also launched a new program planning effort. With the addition of new faculty we were now able to strengthen our research methods courses. Given the growth of the field of higher education over the years, we also decided to focus more clearly on the areas of higher and postsecondary education for which we wanted to be known. We adopted four conceptual areas on which to focus: organizational behavior and management; academic affairs; public policy; and research, evaluation and assessment. These were seen as areas in which we would retain expertise on the regular faculty, offer a core and series of advanced courses, strive to maintain active related research and encourage faculty involvement in one or more professional associations related to these areas. These areas would guide our academic program focus, define our research interests, and shape our relationships to the professional administrative and policy groups in higher education.

ACADEMIC AND SCHOLARLY ENDEAVORS

Despite the administrative demands of the Center directorship, I was determined to maintain the academic and scholarly work that had begun during my years as assistant and associate professor. Over my twenty years as director I received eleven research grants from nine different funding agencies on which I was the Principal Investigator (PI) or co-PI. Government grants included a Fulbright to Examine Planning in German Higher Education, a Department of Labor grant focused on Underemployment of Ph.D.s, an NIE grant to study the Participation of Chicano Students and an OERI/DOE grant on the Organizational Context of Teaching and Learning as part of NCRIPTAL. Foundation grants included ones from Kellogg for Innovative Programs; Exxon for Patterns of Program Discontinuance; Ford to study Institutional Perceptions of Higher Education's National, Institutional Membership Associations; and Spencer on the Effectiveness of Different Institutional Responses to Increased Black Enrollments. The diversity of topics again reflected a common element. All examined how higher educational institutions as organizations dealt with or responded to differing pressures or external issues.

Publications during this twenty-year span were also varied. Of the over 85 formal publications fourteen were books or monographs, 22 were chapters and 20 were articles in refereed journals. In addition there was an array of project research and technical reports and numerous published case studies used for both comparative research and for teaching purposes. The topics, like the grants, addressed the challenges facing colleges and universities as organizations during this period.

The interest in diversity was a dominant one for me in the first half of this period. The 1974–76 study of increasing black enrollments previously mentioned led to the co-authored book, *Black Students on White Campuses* in 1978, fourteen published institutional case studies and several published articles. In 1978–80 a study of Chicano participation led to the co-authored publication, *Educational Hierarchies and Social Differentiation: The Structural Patterns of Chicano Participation in Colleges and Universities* in 1980. The Spencer grant followed up on the earlier black enrollment grant and led to a co-authored publication, "Stages In Response of White Colleges and Universities to Black Students in 1980." This early interest in diversity research would become a thread in the Center's research throughout the remainder of the 1980s and later be strengthened with the addition of Michael Nettles and Sylvia Hurtado to the Center faculty in the 1990s.

Certain national and state level dynamics were also of interest to me during this period. In the late 1970s a small grant from the Education Commission of the States led to publications on innovations in state level funding patterns and on early state level performance assessment attempts. This was long before the interest in institutional assessment spawned in the mid to late 1980s and with which I would become involved in the late 1990s. Statewide reorganizations also spawned some research on and publications about the nature of these reorganizations and their institutional impacts in the early 1980s. A Ford grant to Joseph Cosand and myself led to a publication, *Presidential Views of Higher Education's National Institutional Leadership Associations*, in 1980 when those organizations were being widely criticized and questioned by their institutional members.

Research on and publication about the emergence and nature of both the institutional research and planning functions received continuous attention throughout this entire period. In addition to numerous articles and chapters the attention to institutional research is reflected in NDIR volumes on *Benefiting From Institutional Research* in 1976 and another NDIR volume on *Institutional Research in Transition* with Mary Corcoran in 1985. I also edited the *New Directions in Institutional Research* series from 1979–1986. Planning was also the focus of several publications during this era. After some early descriptive works on planning, a chapter on “Alternative Approaches to Planning” in *Improving Academic Management* in 1980 provided conceptual synthesis to a rather fragmented literature on planning. A new conceptualization of the planning process emerged in a 1993 chapter on “Contextual Planning: The Challenge of the 21st Century,” which was published in *Higher Education in Europe for Tomorrow* by the European Association for Institutional Research (EAIR) in 1993 and would be elaborated later. Much of this work on institutional research and planning is summarized in my organizational books on higher education (next paragraph) and continues into the present. The significance of following the development of these two functions for the past thirty years is perhaps best exemplified by the fact that I co-edited the first *ASHE Reader on Planning and Institutional Research* in 1997.

As noted previously, the primary conceptual anchor of most of my publications deals with the organizational dynamics of how institutions respond to various internal and external issues, challenges and changes. The publications also represent my academic, administrative and analytic perspectives. The case studies are often designed for pedagogical use in

administrative training or in the classroom as well as for research purposes. The writing on IR and planning has a distinctively analytic flavor although, on both topics, I have attempted to conceptualize how these functions were developing and new ways of conceiving them. Several articles which I wrote at various times over my career — but primarily during this time — attempted to synthesize the development of the literature on colleges and universities as organizations and to examine the theoretical nature of our research and scholarship as a field. However, some publications have attempted to pull many of the strands together in a more comprehensive way. The 1980 book, *Improving Academic Management*, which I co-edited with Paul Jedamus, examined colleges and universities as organizations broadly and was reprinted numerous times by Jossey-Bass and sold well into the late 1990s as one of their major organizational books on higher education. A co-edited volume on *Key Resources in Governance, Management and Leadership* in 1987 provided a comprehensive guide to the literature in this area. The third and fourth volumes of the *ASHE Reader on Organization and Governance* (1986 and 1991) which I edited reflected the scope of the work in this area.

Participation in the NCRIPAL, the USOE funded R and D Center, from 1986–90 provided an impetus to redirect some of my earlier work. Prior to that time my focus was mostly on the strategic, managerial, resource, administrative, leadership and IR and planning dynamics of an institution not on the academic functions. In this new endeavor my research was focused on the organizational dynamics supporting and promoting the improvement of undergraduate education. This led to a set of articles and publications that developed a conceptual framework of what constituted an organizational environment for teaching and learning and for student learning and that provided descriptive practical perspectives such as identifying administrative barriers to improving undergraduate education and what administrators are doing about it. More conceptual research explored the impacts of culture and climate in the academic workplace for undergraduate education and on *Quantitative and Qualitative Approaches to Academic Culture*.

#### PROFESSIONAL COMMITMENT AND SERVICE

I have already noted my proclivity for being involved in things that kept my scholarly and research interests grounded. This was particularly true during these years, 1976–1996, that coincided with my center

directorship. Being director provided an introduction to many opportunities which had to be managed. I chose selectively to serve on national commissions and groups related to issues that were consistent with the Center's mission and to limit my personal involvement in other activities, consultancies, etc. to ones that did not interfere with my grant involvement or that related directly to my teaching and research interests. For the most part it worked out. However, I did choose to become intensively involved in three national associations that were closely related to my own personal and professional interests: ASHE, AIR and SCUP. They also relate to my interest in bridging the academic, the analytic and the administrative worlds of higher education. Each deserves a few brief comments since my major leadership in each occurred during my twenty years as Center director.

As already noted, I was introduced to the informal Professors of Higher Education group at AAHE during my doctoral work and was informally invited to the meetings when ASHE was being formed. Without any serious contemplation, ASHE became my first serious professional community. I believed that this emerging field in which I was gradually becoming a member needed such a group. From 1973–1980 I served my apprenticeship in various roles, first as secretary when it was still in its embryonic stage and then successively as a member of the nominating, the program and ultimately the executive committee. In 1982–83 I became president with some knowledge of what ASHE wanted to do but little idea of how to be president of such an organization — particularly one that did not yet have a central office and staff. I set out a personal agenda — to get capable people who were committed to ASHE to chair the emerging key standing committees, to support the development of one or more professional publications and to try to strengthen the interdisciplinary focus of the association. I think I largely accomplished the first, set the groundwork for development of the second and gave most personal attention to the third. I managed to get a small grant from the Ford Foundation by arguing that this new association needed to strengthen its ties to other disciplines and proposed to do that with a special focus at the annual conference. Using the funds I was able to entice Prof. James March from Stanford representing the social sciences, Professor Walter Metzger from Teachers College at Columbia representing the humanities and Dr. Michael Marien, head of the World Futures Society representing that perspective to keynote the annual conference. Each used his own perspective to address the changing nature of higher education and implicitly the challenges for our field and ASHE. Having always worked in and studied rather stable

organizations, I enjoyed the challenge of trying to give shape and direction to a voluntary one. At the end of my term, I also adopted a stance I would apply in future associations — fade into the background, let others step forward to give guidance and enjoy participating once again as a member.

My experience with AIR was somewhat similar. I had been introduced to the association as a result of my doctoral program fellowship and as an assistant professor had found myself teaching about this emergent function or activity. Don Lelong, director of institutional research at the University of Michigan at the time I joined the Center faculty, was soon to become vice president and national program chair. I was recruited to help with that task and, as they say, the die was cast. I found the association an interesting contrast to ASHE. Most of the early AIR members came from the faculty and had academic backgrounds but were doing very applied work that had high visibility. College presidents were managing rapidly growing and changing institutions and needed data and research on their problems. I was teaching the subject that was not yet fully developed and sending graduate students to work in the field. I needed to know about it. For the next dozen or so years I attended and participated in the Annual Forum, served on a variety of committees (placement, professional development, Forum program, editorial, financial, publications and ultimately the executive) and in 1983 was elected vice-president and president elect. The challenge was a bit different than ASHE. The association had existed for over 20 years by then and would hold its 25th Forum the year I was president (the Forum actually started before the association). AIR had a central office with an executive secretary and small staff, was considerably larger and had more member services and a more complex set of committee and officer structures and procedures. But despite its history of success, AIR was in a distressed period. In the early 1980s higher educational institutions were experiencing very difficult financial times and reduced budgets. IR offices were particularly hard hit so AIR was suffering membership loss and attendance at their Annual Forum, a substantial source of association revenue, had declined. My role was different from ASHE and obviously the strategy needed to change also. I did employ the strategy of getting capable, committed people to chair key committees. I also convinced the executive committee to launch a two-year strategic planning process for the association. We would spend time during my year in office giving a great deal of attention to developing a plan to both strengthen the association's current pattern of operating and to lay out some directions for the future. Marilyn McCoy, who was vice-president, agreed to chair



that committee and then to use its results to guide the association during her year as president. Two elements of the resulting plan were critical. First, a regional organization pattern was established and attention given to membership and program development at that level, and second, the association leadership was convinced to stop defining IR as an office and to begin defining it as an institutional process. This latter was controversial since everyone identified with “their office in the institution”. But it allowed for broadening the base of membership to anyone doing analytic work in the institution and enhanced the attractiveness of AIR to many other potential members. A final tactic that I employed was borrowed from my Center experience. Despite declining membership, that year’s forum was reconceived as a celebration and the traditional Presidential speech was transformed into to a symposium on the future of the IR in the context of changes in higher education. It drew participants from ASHE (such as Burton Clark). Attendance at the Forum went up, membership began to expand, the association now periodically takes time out to plan — and it has continued to expand.

My final association, SCUP, was an even different experience. I had been enticed into it in the early 1970s at the suggestion of my doctoral advisor, James Doi. Like AIR, SCUP had a longer history than ASHE and was already established with a central office, annual conference and embryonic member services when I encountered it. I was also about the only academic among the membership. This was clearly an administrative association. For about fifteen years I served in variety of capacities, but as the only academic, I found myself chiefly working with the development of publications, helping plan for and teach in a planning institute and starting an academic planning track for the Society’s meetings. SCUP, however, experienced a crisis far more severe than AIR. At my first Board of Directors meeting, we discovered that the executive director had been misusing funds and that the Society was essentially bankrupt. For the next several meetings the issue was whether to declare bankruptcy or attempt to save the association. Eventually creditors were convinced to take less money than was owed them, the society’s central office was closed and its programs curtailed, a contract was let with a Canadian group to handle day to day administrative affairs and the annual meeting was financially underwritten by the host university. It operated for about five years this way and was just recovering when I was elected vice-president and president-elect in 1987. The strategy this time was simple but ironic. SCUP did not plan: so we introduced a strategic planning process to plan for the establishment of a new central office, a plan for regional membership, a financial plan and a new



structure that would emphasize four tracks — academic planning, campus and facilities planning, resource planning and institutional planning. Once again in a quirk of fate, as in AIR, Marilyn McCoy had been elected to succeed me. She chaired the planning group while vice president and agreed to implement the plan as president. SCUP too has prospered and continues periodically to take time to plan.

#### WINDING DOWN — OR UP? (1996–2004)

In the past eight years since stepping down as Center director and becoming less involved in professional association activities, my career has taken a somewhat different path. New opportunities, challenges and choices have redirected, although not basically altered, my career. During my years as Center director, I was considered for and explored a number of executive officer posts in colleges and universities. The interest in the administrative route had not immediately dissipated in 1976 when I became a full professor and director of CSHPE. But the final choice always was to stay on the more academic path. However, by 1996 I was no longer interested in pursuing administrative alternatives. I realized I had come to value having control over my own time and my own agenda — something that was not possible in most senior administrative positions. This meant obtaining new grants and redefining my agenda. Four activities or areas of interest have provided new opportunities and challenges to redirect my career and each required new commitments and gaining new competencies in order to contribute. Those are: the National Center for Postsecondary Improvement (NCPI), institutional transformation, higher education as industry and international involvements.

#### NCPI: A NEW LEVEL OF RESEARCH COLLABORATION

In 1996 a collaboration among higher education researchers from the Higher Education Research Institute at Stanford, the Institute for Higher Education at the University of Pennsylvania and the Center for the Study of Higher and Postsecondary Education at the University of Michigan, under the leadership of Patti Gumport was successful in obtaining an OERI/DOE grant for the creation of NCPI. NCPI would continue through 2003. Patti Gumport was the overall director of the NCPI although each institution had its own research program that was coordinated with those at the other institutions. This involvement in a

multi-institution, national research center which required coordination of the research projects on each campus, among the research programs at the three different universities and in turn had to be coordinated with our federal sponsor was a new level of research collaboration complexity. Since I eventually became the research director for Michigan's participation, I had to deal with federal guidelines, inter-institutional contracts, relationships among researchers on the other campuses, coordination among our own campus research projects and running my own project. I clearly had to learn how to manage a new level of research collaboration.

Our own Michigan research program involved three interrelated research projects focused on improving the use of student assessment at different levels. Michael Nettles directed a project on state level and accreditation agencies efforts. I focused on organizational and administrative support for student assessment. And Sylvia Hurtado and Eric Dey addressed department level and faculty use. This continued my 1985–1990 NCRIPAL focus on examining academic issues from an organizational perspective but this time on assessment rather than undergraduate education more generally. While the three projects were coordinated, my own project involved a comprehensive literature review, the creation of an organizational framework, a national survey of institutional practices, some intensive comparative case studies and surveys of faculty and administrators on campus. This effort led to over twenty publications (technical reports, literature reviews, monographs, journal articles and chapters), numerous conference presentations, a tool kit for campus use that is available online and three dissertations. One article, *External and Internal Influences on Institutional Approaches to Students* (with C. Augustine and M. Einarson) received the AIR Award for outstanding paper and was published in *Research in Higher Education* (2000). As a result, I would also become engaged in some accrediting agency and campus consultations and even in international presentations and governmental consulting on the use of student assessment in academic quality improvement..

#### KFHET: A NEW MODE OF COLLABORATION AND FOCUS ON TRANSFORMATION

From 1998–2003 I participated in a Kellogg Foundation grant that would stimulate involvement in a new mode of collaboration between researchers and practitioners and expand some of my earlier interests in organizational change. Kellogg had made a number of grants to institutions who were engaged in extensive or transformational change efforts

but was beginning to question the efficacy of making grants to one institution at a time. The Kellogg Forum on Higher Education Transformation (KFHET) was formed as a way to bring campus practitioners of change and transformation from the five institutions who had received Kellogg grants together with higher education researchers and foundation representatives to see if the three groups could work together to enhance their mutual understanding of the transformation process. Representatives from the five diverse universities, a group of higher education researchers (Sandy and Lena Astin from UCLA, Zee Gamson from the University of Massachusetts at Boston and myself), Kellogg program officers and staff from ACE who also had a similar program with several universities made up the KFHET group. The intent was to engage the practitioners and scholars in the process of simultaneously learning from each other and then to expand that knowledge to a larger group of universities. In a sense it was more than “action research” in which researchers work with practitioners to train them to do their own research and feedback. It was what I called “research in action” since the collaborative research was to be done while the phenomenon to be studied was being created.

For me this was an opportunity to work with researchers from other higher education programs (we also involved students), to make the research-practitioner linkage in which I was always interested, to experience a new form of research collaboration, to conceptualize a new mode of “research in action” and to expand my interest in organizational change to the study of macro or transformational change. While all of us (researchers, practitioners and foundation staff) were involved as equals in the learning process, we produced a variety of different contributions. My major effort, in addition to learning about this form of collaboration, included the design of a course on organizational change and transformation, the preparation and dissemination of several pedagogical case studies of institutions that were undergoing transformational change, the development of a paper on “research in action”, and the formation of a Faculty Network on Organizational Change and Transformation of about 80 members that met for four years at ASHE and began expanding their own efforts to develop courses and research activities in this area. The other researchers made contributions as well. Unfortunately the funded part of the program ended when the Kellogg Foundation, facing a declining stock market, decided to modify its focus and discontinued its higher education efforts. However, my own interests in transformational change continue and are reflected in some of the international efforts mentioned later.

HIGHER EDUCATION AS INDUSTRY: A NEW PERSPECTIVE

As previously noted, throughout my career I had approached my academic and scholarly work largely from an organizational behavior perspective and most often focused at the college or university level of analysis. However, in the mid 1990s while examining the changing nature of institutional planning, the critical nature of external forces and the type of institutional responses to those forces, I became aware that viewing higher education as industry provided some important new insights and suggested some new institutional planning dynamics. These were articulated in two chapters (one and seven) in a book that I co-edited in 1997, *Planning and Management for a Changing Environment*.

The argument is that external forces not only reshape our institutions and give rise to our notions of strategic planning in which institutions adapt to and find their niche in that changing environment but that they are also reshaping our industry — moving it toward a postsecondary knowledge industry — which has independent effects on institutions and demands a more pro-active planning approach which I call “contextual planning”. The concept of industry suggests that it is merely a set of organizations that produce a similar product and use similar resources. According to scholars of industry change, the nature of an industry and its patterns of competition are affected by changes in the power of customers (students), the power of suppliers (resources), entry of new organizations (educational ones), increase of substitute services (alternative educational organizations) and innovation in the core technology (teaching and learning). In higher education we have gone from an industry of traditional higher education (pre-1950s) to mass higher education (pre-1970s) with only two of these factors that shape an industry changing (number of students and of institutions). We then changed from mass to postsecondary education (post-1970s) with two different factors involved (shifting the pattern of distribution of financial aid from the institution to the student and changing the definition of institutions which qualify for federal student aid from traditional institutions to include proprietary ones).

By the late 1990s there were many external forces challenging postsecondary education (diversity, telematics revolution, quality reforms, press for economic productivity, relearning and later learning markets, globalization, etc.). Each of these forces, it could be argued, impact almost all of the factors producing change in our postsecondary industry — moving it toward a postsecondary knowledge industry

(PSKI). For example, the PSKI includes new types of educational organizations; many new non-educational organizations which can provide postsecondary knowledge and the means to use it for teaching and research; new computing and telecommunications modes for use in our core technology of teaching and learning; extensive new and more diverse student markets and demands; suppliers of financial resources who are more constrained or demanding and suppliers of computing and telecommunications resources who used to be customers; and many new or substitute organizations willing to offer postsecondary learning opportunities — all in a more competitive environment. This requires institutions willing to take a more proactive stance toward this changing industry and pattern of competition. Institutions need to be willing to consider redesigning themselves by redefining the industry in which they operate and the role they want to play, redirecting their mission and external relationships, reorganizing their basic academic structures and processes, and remaking the academic culture of how academic work is done. In sense, considering transformational change not just small-scale institutional changes.

#### INTERNATIONAL INTERESTS: A RECOMMITMENT

My interests in the international arena of higher education are not new ones but are changing and becoming more focused. As I noted previously, I had a Fulbright to study German Higher Education in the mid 1970s as a way of expanding my perspective on higher educational planning at the state and institutional level. In AIR I had been active in the late 1970s in attempting to gain an international presence of European members. When that did not work for a variety of logistical and financial reasons, I assisted them in founding the European Association of Institutional Research (EAIR). I am still active in that organization and in 2003 was invited to contribute a chapter comparing U.S. and European developments in institutional research for their 25th anniversary volume. In 1984 I was invited along with Burton Clark, Robert Berdahl, and Neil Smelser to address the founding meeting of the Netherlands Association of Higher Education Management which coincided with the founding of the Center for Higher Education Policy Studies (CHEPS) at Twenty University.

As Center director I hosted many international visitors and often was exasperated at my colleagues reluctance to spend time with them (that fortunately is not true today). In fact some of these sessions led to

ongoing relationships both for the Center and for me personally. In 1990 an earlier relationship with a Visiting Scholar from China resulted in an invitation for Kim Cameron and me to do a two-week workshop for administrators from universities throughout China on Change and Reformation in Higher Education. That has resulted in a long-standing relationship with faculty in the Institute for Higher Education at Peking University. A similar situation occurred with Visiting Scholars from Brazil. From 1989 until 1998 in alternate years I spent time in Brazil providing administrative workshops for Brazilian administrators and consulting with the federal Ministry of Education and in the other year hosting administrators in Ann Arbor at a one-week conference on university management.

While I had this previous interest in developments in the organizational and management patterns in these countries, I never considered myself an internationalist and certainly did not consider becoming a scholar of comparative higher education. I was aware that that would require an extensive undertaking for someone with my limited international higher education knowledge and limited language abilities! But these various involvements did alert me to the fact that the study of higher education was becoming more common in many countries, especially after the mid 1980s. It also meant that by 1996 with my administrative duties at the Center finished, this was an area that I was free to explore more fully.

Since 1996 I have been engaged in numerous international activities. From 1999 to the present I have been part of the faculty team for the Salzburg Seminar's Russian Universities Project. Each year executive officers from 10 universities in Russia attend a seminar dealing with major institutional policy and reform issues. They then have the option of inviting visiting advisor teams to their campus to advise on problems or issues central to their campus. In this activity, I have learned about the problems of reforming a highly structured system of institutions in the midst of a defunct economy and rapidly changing political scene. Projects in two former Soviet Republic countries offered differing insights. In Hungary I participated in a World Bank project that was attempting to restructure their institutions after the fall of the Soviet Republic. That provided some lessons about the limited and somewhat unpredictable role that external agencies can play — a national election changed the government and the new political leaders decided to reject the relationship with the World Bank. From 2000–2002 I was involved in a project in Kyrgyzstan, directed by my colleague Janet Lawrence, designed to provide management training for that country's institutions

as they attempted to assume responsibility for their institutions and their management when their Russian executive officers left. This was a lesson in how freedom and democracy can create political turmoil when coupled with the withdrawal of leadership and resources.

In 2001 I returned to Beijing for the first time in over ten years as a guest of Peking University's Institute for Higher Education to participate in an international conference they were sponsoring. Seeing the results of a decade of development on that campus, I learned about the extensive changes that could occur under a highly controlled communist system when higher education was its priority. That was reinforced in 2002 when I was one of ten international faculty invited to present a ten-day seminar for the presidents of China's top 80 universities. It was held in an elegant communist party resort facility outside of Beijing and the participants were required to stay the entire time. There I learned about the breadth of the changes in the Chinese system of higher education that were occurring and about the high qualifications and abilities of its university leaders. These insights about higher education in China have been reinforced by my involvement the past three years in a workshop the Center has hosted annually for administrators from universities in the city of Tianjin. This merely underscores the breadth of the efforts to expand and strengthen higher education.

This past year I have had the opportunity to visit Centro de Investigacao de Politicas do Ensina Superior (CIPES) to explore changes in the higher education system in Portugal and some of the tensions regarding the EU's Bologna Declaration. Most recently I have been involved in a project redesigning Qatar University and preparing it for a declaration of autonomy from the Emir of Qatar. Trying to redesign an institution in a country whose centralized monarchy is attempting to transfer control from the government to its institutions is yet another set of dynamics in government institutional relations. Next year I hope to spend time in Japan with higher education research colleagues there.

#### A NEW CHALLENGE AND FOCUS?

All four of these streams of activity have coalesced to provide a new scholarly focus examining differing strategies of institutional level transformational change in differing social, political and economic contexts. The KFHET project has allowed me to develop a new perspective on macro-organizational change. Most literature on organizational change in higher education has been focused on more micro and internal changes

of structures, units or processes. In the international realm reviewing the literature has highlighted the fact that most research has focused on system changes as political, governmental and economic realities changed while there has been relatively little attention to the varying strategies of institutional change under differing and, often, extensive national system changes. These varied experiences in other countries suggest that important but very different institutional transformations are taking place. The industry perspective has been useful in understanding what is going on with respect to higher education in these rapidly changing countries. And since examining these issues requires a cross-national approach, the inter-institutional collaborative strategy of NCPI may prove a useful guide. The growing array of research groups studying higher education in other countries provides a valuable new set of colleagues and makes such international collaboration more feasible than ever before.

#### SOME OBSERVATIONS FROM GROWING UP WITH THE FIELD

##### ASHE AND THE FIELD: STRIVING FOR RECOGNITION BEYOND ADOLESCENCE

It has been almost four decades since I took my first position in higher education at the Harvard Business School. The study of higher education was still in its infancy and ASHE did not exist. It is difficult to separate observations on the field and on ASHE because in many ways they struggled with the same issues but I will not attempt to recount them. Clearly both the field and ASHE have prospered. From a small number of higher education programs, centers and institutes in a handful of universities; a limited number of faculty and researchers who could meet in one room and a small cadre of graduate students, the field has grown steadily. Today there are many institutions offering masters and doctoral degrees in higher education and a much larger number of faculty and graduate students. There are also a large number of organizations, associations and agencies that contribute to our knowledge about and our research on higher education. There are career paths for graduates where previously there were none. Our graduates are now hired in many areas with the expectation that their education and training are appropriate in a college or university setting. We have a primary professional association, ASHE, and several closely related ones such as AIR and AERA-Division J which support our efforts.



Yet as a field we struggle with issues of identity. When someone asks, “What is your field?” and we reply, “higher education,” it is often met with a quizzical look or a felt need to elaborate and explain. We still argue whether we are a discipline (most would probably agree we are not), a professional field or an interdisciplinary or multidisciplinary field. We often are small groups embedded in larger academic departments. We even struggle over whether to call ourselves higher or postsecondary. Clearly we have grown and achieved some recognition as an appropriate field of graduate study, but we are also still in an adolescent stage compared to many other fields.

Similarly ASHE has succeeded beyond the expectations of that first small group who met to discuss the formation of a new association. Its membership has grown tremendously over the years. In addition to faculty members and researchers, it now officially includes graduate students, former graduates and even some administrators and policy makers interested in the field. Its annual meeting has grown from less than 100 to over 1000. The organization now has a central staff to guide and assist the board and officers in conducting the association’s work. There are now respected publications either sponsored by ASHE or affiliated with it.

But it too is still struggling with issues of identity that reflect the field itself. Should it actively seek membership among administrative groups — particularly those with a limited research or analytic focus? Should it increase its revenues (dues and conference fees) and expand its central office as other associations have done? How should it relate to other higher education associations? Should it seek grants and establish endowment funds as other larger and wealthier associations have done? Should it attempt to monitor quality within the field or among programs? ASHE may actually be more mature than the field itself, but it is still experiencing the adolescent pains of a growing professional association.

As ASHE and the field continue to develop, I would suggest there are a few central issues and challenges that ASHE, as the organized leader in the field, will have to confront as it continues on its path to maturity. This is based both on my involvement in other more developed associations and on my observations as a longtime participant in ASHE.

### *Identity*

ASHE’s name, its programs and its publications continue to suggest a primary focus on traditional colleges and universities as we have

historically understood them. We are now twenty-five years into a postsecondary era that expanded the definition of institutions which delivered and learners who sought education beyond high school. Clearly traditional institutions still constitute the bulk of students attending directly from secondary school and I do not believe Peter Drucker's prediction from over a decade ago that "universities as we know them will cease to exist in twenty years" nor do I expect our college and university system to wither. But there is a huge world of postsecondary education to which our programs, our research and our association give little attention. As we enter a postsecondary knowledge era in which new sources of postsecondary information, new learner markets for postsecondary learning, new types of delivery systems, new types of educational institutions, new non-higher education organizations engaging in postsecondary teaching and learning, new global institutions and competition from higher education in other countries grow, ASHE and our programs need to consider how they will incorporate these less traditional postsecondary patterns.

#### *Differentiation and Fragmentation*

It is clear that higher education as an arena of study has expanded greatly since I joined the ranks. Some differentiation of areas for study and research would naturally occur. New courses, new areas of concentration or new areas of research have emerged. However, there is a difference between differentiation which adds to our understanding yet is still part of our comprehensive study of the field and fragmentation which separates these new areas and makes them specializations only loosely connected to that comprehensive understanding. ASHE and other association's willingness to develop tracks or special interest groups within their conference and programs is a natural attempt at differentiation which assures that new areas of study and focus are welcome yet treats them as part of the whole. The establishment of separately organized meetings and memberships groups such as the International or the Policy pre-conferences at ASHE may be a form of fragmentation — limiting the opportunity for those who cannot attend both (or who chose not to do so) to gain from the interaction with these new areas. The issue of when subfields can and should emerge and to what degree they should be separately organized is a difficult one for a growing field to address.

### *Separation and Integration*

One of the strengths of the early higher education programs and of ASHE was their strong ties both with the disciplines and with the policy and administrative world. This was largely because the early professors in the field either came from the disciplinary faculty or from major administrative and policy posts. They brought a rich conceptual and theory-to-practice link to their research and teaching. Many of the early faculty members maintained an active role in their related disciplinary or administrative associations and their work was well received in them. One of the ironies is that as the field has grown and as ASHE has matured, most new faculty are now graduates of higher education programs. Individuals with substantial administrative experience either do not have the scholarly record for a faculty appointment or cannot afford the salary reduction to accept a faculty post. Disciplinary graduates either do not apply or are viewed as too risky given their lack of knowledge about higher education. The net effect is that both our field and ASHE have become further isolated from both our underlying disciplines and related professional associations. This is exaggerated by journals which are specific to our field, conferences where we only talk to each other and an ASHE membership pattern which is almost exclusively persons from our field. ASHE has periodically made attempts to bridge this gap. I emphasized links to the disciplines during my presidency. Recent annual conferences have featured senior administrators and policy makers and there have been some joint association events. But a more deliberate and continuous focus is required to address this divide.

### *Sophistication or Significance*

One of the characteristics of an adolescent field that I have observed is the emphasis on scholarship that is conceptually strong and methodologically rigorous — often to gain legitimacy. Our journals in higher education all stress this. We have debated the relevance and appropriateness of qualitative and quantitative research. But the net effect is that in the press to get published, accepted for conference presentations and recognized, we often overlook the significance of the scholarship and its impact on the field — either conceptual or practical. That leads to narrow and more focused studies that may not make significant contributions. If my memory is correct, it's been over fifteen years since ASHE discussed this issue. And that was stimulated by a relative outsider — John Keller — whose *Change Magazine* article, "Trees Without

Fruit,” criticized higher education research for being too narrow. This is an area that ASHE can address, but it is also one that individuals can address if they think in terms of their program of research (not just the next study) or engaging in larger collaborative research projects with colleagues.

### *Breadth versus Focus*

In a field of study which has expanded as rapidly as the study of higher education — fueled both by the changes in our institutions and the potential array of disciplines on which we can draw — the question of whether our programs of study should try to cover the water front of topics providing breadth or instead focus on some aspects of the field which can be done well, is a critical one. In smaller programs (in terms of faculty) this is especially critical. But even in larger ones such as the one where I reside, there is also an important issue of deciding what your program can do well and what you can provide to fit specific student needs. The issue has apparently been discussed in some programs around the country as several have attempted to portray (dare I say — market) themselves as having a particular focus or preparing students for particular functions or roles. At Michigan, as I noted previously, we have attempted to identify four areas of specialization (in terms of content coverage, faculty expertise and related research). Those discussions need to continue on each campus as we address the changes in the field of higher education. Or is it postsecondary education? Or postsecondary knowledge industry?

### PERSONAL INSIGHTS GLEANED: A TOP TEN

One is always hesitant to provide insight much less advice about what one has learned that shapes a career in our field. But since one of John Smart’s purposes for these autobiographical chapters is to offer suggestions to current scholars, I do so with some reluctance — recognizing that mine are lessons from the past. For early and mid-career scholars, the future is likely to be much different. Borrowing David Letterman’s Top Ten and without the implication of rank order, I offer the following:

- *Conceptual Focus*. Base your preparation and career on a sound disciplinary or interdisciplinary focus. While issues are important, building a career based on commitment to a particular issue is problematic. Issues change, are resolved, fade away, or go out of

vogue. One can almost always bring their conceptual approach to bear on any issue.

- *Emerging Issues.* Use emerging issues, significant changes or new challenges to higher education whenever possible as the focus for your work. Studying emergent phenomenon is difficult and requires a more flexible and risky approach than traditional academic research — an action research or research in action (i.e., design and methodology change as the issues does) perspective. Studying things after they have occurred and patterns are clear is both easier and less risky. But the likelihood of a making a significant difference — being identified with the issue, attracting funding and making an impact — are more likely if you are ahead of the pack.
- *Emphasize Collaboration.* Learn early in your career to use cohort groups and to engage in cooperative projects that involve students, faculty colleagues and/or administrators both within ones own institution and across institutions. You gain the richness of others' perspectives and are able to address larger and more significant projects that are more likely to make an impact.
- *Building a Record.* Commitment to an area of interest is not sufficient. Both to make a difference in the field and to enhance one's career, it is important to build a record of successful scholarly and/or professional contributions. Several strategies come to mind: think in terms of your program of research not just the current project, design projects that have action potential not just scholarly contribution, disseminate products or publications to multiple audiences not just other scholars of higher education.
- *Methodology.* Don't get hung up in the methodology wars unless your major focus is research methodology. Studying important or emergent issues and topics will almost always be enhanced by using varying approaches. Academic research, action research and research in action; qualitative and quantitative approaches; and various techniques may all be appropriate. Try to be reasonably proficient in several and know who the experts are in specific ones and rely on them.
- *Funding.* Foundations and funding sources have their own agendas, change their focus periodically and may even be fickle. Depending too heavily on any one is not the best strategy. States provide little funding for research; federal agencies' priorities shift with political winds and each funding period; and foundations have boards whose members are not the program officers with

whom you most likely deal and they change their priorities. Some of these funding sources are more interested in action programs than they are in research (but remember you can always build research into an action program). Others may have competing non-higher education agendas to fund. Be responsive to those which are supporting you and maintain a reputation for delivering but always keep alert for other potential sources.

- *Build Linkages.* Consider what administrative, professional field or disciplinary associations beyond the study of higher education (ASHE, AERA-Div J etc.) that your work is most closely related to and build and maintain linkages with that area. This will strengthen your disciplinary or interdisciplinary core focus and/or the link of your scholarship to professional practice.
- *Association Leadership.* Succeeding in a professional association setting, which is a voluntary organization and is therefore unlike where we all work, has at least four elements. First, “getting started” usually requires taking an active stance and volunteering. You can’t wait until someone recruits you. Running around the halls trying to meet the “right people” is at best marginally useful. But it also requires doing some work — producing something that the association or the committee you joined values. That guarantees you will be noticed. Voluntary associations are full of people who volunteer but don’t do much. Second, be active in the academic substance of the association — present papers etc. Your administrative and service work will be appreciated more. Third, if you gain a leadership role, keep focused. Help form a central agenda or plan that addresses a major association need or helps it address a critical problem. Select people committed to the association for key unelected roles — usually committee heads — and then turn them loose with an expectation that they will produce something important. Select your own priority and pursue it. Most association groups will let its elected leader have at least one priority that is his or her own contribution. Fourth, when your term is up, let go. It is now the next generation’s responsibility.
- *Mentees.* Remember that to be a mentor one needs to have a mentee. To often we think in terms of who will be our mentor or whom we will mentor. But being a good productive mentee, as well as having a committed mentor, assures that both parties in the relationship will value it and perhaps be more useful to each other.

- *Opportunity and Challenge.* Periodically explore new opportunities that challenge you to gain new competencies. While new opportunities may occur frequently, they also may not or they may go unnoticed as one progresses in one's career. At least every three to five years, it is useful to examine other opportunities — particularly new positions in a different institution or in a different role. In the process of such an exploration you get a better sense of how compelling your current work or position is, how valued you are outside your own center or department and, sometimes, how valued you are in your own setting.

#### A CAREER OR A CALLING

It has been over forty years since Bill Colby and I met on the football field that hot August afternoon in Geneseo, Illinois. As I finish this, I wonder if he would still be intrigued by the varied and unpredictable path my career took compared to his. I still envy his clear, focused and unwavering career. Clearly his was more an example of the rational, goal-oriented career-planning model. But it was more than that. It was a calling. How one finds that so early in life is unclear to me. But it is clear that mine unfolded in the iterative path: exploring new opportunities as they arose and the challenges they introduced, making choices to pursue some and not others, becoming committed at least for a time to that, finding a community that reinforced it, becoming increasingly competent or comfortable in that choice — and then repeating that process on several occasions. Those choices eliminated some paths and opened others. But in retrospect they led to a career that I would not change. I have had the opportunity to work in a socially important field, to grow up professionally with an emerging field of study, to find valued colleagues and communities in my institution and in the professional arena of higher education, to be able to make a commitment that led to contributions, and to be recognized by my colleagues. One difference between Bill and me is that I found my calling later.

When I began this journey, many of my early colleagues embarked on it with me with the notion that the world of higher education was changing rapidly and unpredictably but that it was exciting and challenging. As we enter the post-secondary knowledge age, I would suggest that the challenge of change and the uncertainty of what lies ahead is every bit as great. When entering a field in a state of flux, I would argue that the iterative process of career development (or evolution) may still

be valuable. But I still envy Bill's certainty about his career calling, the strength of his conviction that guided him and the rational strategy he employed.. As many of you are still framing or refining your higher education career, I end with a final piece of advice, more as a hypothesis than a certainty. "Think like Bill, behave like Marv." You will have the comfort of knowing the direction that your calling is taking you and the enjoyment of surprises as it unfolds.

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## 2. PROFESSORS AS KNOWLEDGE WORKERS IN THE NEW, GLOBAL ECONOMY

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Historically, the configuration and working conditions of professors in the United States have been profoundly influenced by fundamental patterns and shifts in the larger political economy of the country. At the turn of the twentieth century, the industrialization of the American economy and rationalization of the nation-state had profound implications for the changing character of the professorate. Similarly, in the post-World War II era, the rise of the military-industrial complex at the heart of a burgeoning and dominant corporate economy globally had significant consequences for the growth and paths of further development experienced by the academic profession in the United States. Subsequent social movements demanding changes in the demographics of the larger labor force, and the expansion of a broad middle class, also had a major impact on the demographics and expansion of the country's teaching profession. Now, with the latter part of the twentieth century and the turn of the twenty-first century the country is going through a shift to a knowledge and information based global economy, which augurs corresponding and complementary changes in the workforce of the academic profession.

Our review of the literature on faculty opens with a section tracing historical changes in the academic profession in the U.S., from the late 1800s to the present. That background sets the stage for and frames our review of the literature on faculty, which examines scholarship in the following areas: faculty time allocation in the U.S.; faculty salaries and

labor markets in the U.S.; international patterns of professorial employment and professional power; and socializing faculty as individuals and faculty acting collectively as agents of social change. We see professors as knowledge workers in the new, global economy. That perspective plays out in part in some of the topical divisions of our chapter. For example, we have a section on international patterns, and one on faculty involvement in social change. And in each of the four topical areas we pay attention to change over time. The perspective that grounds our work also plays out in the emerging issues that we identify within each of the four substantive sections in the body of our chapter. In addition to literature reviews that concentrate on the most heavily researched areas on faculty, we target some less studied issues that we believe offer much promise for understanding professors in the new political economic context in which we find ourselves. Those less studied issues reflect the importance of understanding professors as knowledge workers. The new directions we identify also reflect directions that the authors are taking in their own work. Thus, the chapter offers not only review of the literature, but also new conceptualizations of professors and their work.

#### HISTORICAL OVERVIEW OF THE ACADEMIC PROFESSION IN THE UNITED STATES

With the industrialization and urbanization that characterized the U.S. economy in the late 1800s and early 1900s came several changes in higher education generally and in the character and configuration of the instructional workforce in particular. Most obviously the development of new institutional types such as research universities and later community colleges, and the expansion of teacher training colleges to prepare teachers for the growing public schools, changed the sorts of settings in which faculty members worked. Equally importantly, and correspondingly, the professorate also experienced professionalization, increased specialization, and rationalization.

The turn of the twentieth century saw the rise of professionals in the U.S. (Bledstein, 1976). College teaching provides one of the major examples of what this transformation meant. The occupation of college teaching became consolidated as a full-time career (Finkelstein, 1984), with defined ranks in the roles of faculty members (e.g., assistant professor, full professor) and a defined track of preparation that involved extended education, increasingly the PhD, in a particular subject

(Metzger, 1987). That made for a marked contrast with liberal arts college professors, many of whom had only bachelors degrees, often in divinity, and in a sense who were “amateurs” when it came to the emerging fields in academe. The struggle over who would define and shape these new fields, and would constitute the professorate has been analyzed in the case of several social sciences by Silva and Slaughter (1984). They track the emergence of professional associations in economics, history, sociology, and political science, and examine the leadership and membership of these associations, and the ways in which they define the roles and purposes of academics. What they find is a contest between a rising group of specialists who are aligned with the emerging forces of power in the larger economy, in the rising national, corporate, bourgeoisie, and in the growing national and imperialistic nation-state. In their words, the rising professionals in the academy gained power by “serving power” with their claimed expertise. The political positions this emerging group of academics took on various issues of relevance to industrialists and imperialists, and their conceptions of the roles that academics would play in and outside of the academy differed considerably from the pre-existing group of college teachers, who were much more connected to local, regional, and landed elites. In short, part of professionalization was a redefinition of the nature, position, and purposes of academic expertise.

A key part of the redefinition had to do with the increasingly specialized knowledge which academics came to develop and master. As Weber (1946) clarified, part of industrialization is the ascendance of the specialist over the generalist. And as many scholars have argued, a key claim of professionals is to mastery of a specialized body of knowledge and expertise. Metzger (1987) has traced the extraordinary proliferation of academic fields in the late 1800s and early 1900s, the burgeoning “substantive” growth, through various processes of increasingly specialized and advanced bodies of knowledge, which were being offered in the new higher education institutions (as well as increasingly in the liberal arts colleges — see Geiger, 2000). By virtue of this growth, entry into the academic profession increasingly was a path defined by doctoral education, in many cases in Germany, before the U.S. higher education system had a substantial number of universities with graduate study.

A key part of the transformation of occupations into professions was the channeling of their entrants through advanced education in universities, which became the gatekeepers for all the liberal professions. And this, too, was a key part of the change in the academic profession. Not only were increasing numbers of faculty members working in new

types of higher education institutions, they were working in new sorts of organizational settings within universities (Geiger, 1986). Growing numbers of faculty members were working in professional schools. The most substantial site for this professional education in the first decades of the twentieth century was schools of education within larger universities, for example, Teachers College at Columbia University. Specialized professors in pedagogy, educational psychology, and educational administration proliferated, as the public school system grew and was professionalized.

Finally, during this time period, the academic profession, like the economy and workforce generally, came to be rationalized. In the realm of industrial production in the larger economy what that meant was a standardization of measures and outputs from one part of the country to the next, to enable mass production. Parts needed to conform to standard configurations, and from one industry to the next, national standards for weights, measures, and the like were established. In many ways, the same sort of standardization came to the academy, with the same rationale of scientific efficiency. Barbara Scott (1983), for example, has traced the profound impact in this regard of private philanthropists like Carnegie on the academy generally, and on academics in particular. Two examples capture the essence of this influence. One is the establishment of the so-called Carnegie units, the three and four credit unit measures that still structure most of the coursework we offer in the academy. The standard algorithm for calculating how many hours and how much seat time goes into a unit and into courses enabled and facilitated transferability across colleges and universities nationally. It was a way of standardizing inputs and outputs for the industry of higher education; indeed, that is just how the creators of these units characterized their development. Such standardization had an obvious impact on the structure of faculty work, and the calculation of time allocation in that work in terms of courses offered, and even student credit hours generated. The second example is the portable pension plan for academics that the Carnegie Foundation established in the early twentieth century, which eventually transformed into the corporation, TIAA-CREF. The rationale for creating what was essentially a national retirement system for professors was to enable and facilitate their movement from one institution and state to another; with a national system their mobility would not be constrained and inhibited by their investment in state retirement plans. Part of standardization was ensuring the portability, mobility, and interchangeability of the workforce (the faculty), not only of the work products (the students and courses). Such a retirement plan

also had an obvious impact on making college teaching a lifetime career, considerably more attractive than it had been previously.

Another sort of public philanthropy contributed to the next stage in academe's development, enhancing its mobility, national identity, and influence. In their classic study of the academic profession, Jencks and Riesman (1969) emphasize the profound significance of the post World War II investment by the federal government in the funding of research. The extraordinary level of federal investment in science and engineering in particular, and also in some other fields, such as area studies, contributed to another major transformation in the academic profession, in the places of their work, the purposes and orientation of their work, and in their professional power.

Just as the rise of the industrial economy changed the sorts of fields in which academics were employed, so too, the Cold War economy of the post-WWII era contributed to the growth of new fields of science and engineering (Geiger, 1993). The development and escalation of what President Eisenhower came to refer to as "the military-industrial complex" had spin-off effects for academe, as examined by Stuart W. Leslie (1993) in tracking what he has called the "military-industrial-academic complex." Increasing numbers of professors were employed in fields that were receiving massive federal research subsidies from the newly created National Science Foundation and entities such as the Department of Defense, Department of Energy, and NASA. The biggest winners in this regard were various fields of science and engineering (e.g., Physics, Math, Aerospace Engineering, Electrical Engineering, Nuclear Engineering). However, there were also significant beneficiaries in the social sciences, where, for example, new area studies programs were housed (ironically, and significantly, instead of in humanities departments, which focused on the language and culture of these societies), programs designed to battle communism by contributing to a better understanding of political and economic development in the Third World. Scott (1983) traced the influence of such "public sector philanthropy", as well as of ongoing private foundation philanthropy, on the emergence and growth and location of these new fields of study.

In a very real sense, these new fields were serving power in a Cold War era, just as the emergent social sciences served the nation-state and imperialism at the turn of the century. One of the down sides to that service has been traced by several authors who have detailed the various ways in which academics engaged in self-censorship and censorship of their colleagues (e.g., see Logan Wilson, 1942). Part of the price of orienting the profession to serving power is that it can come to be seen

as dangerous in this context to criticize power, to bite the hand that is feeding you. Thus, Schrecker (1986) and Lewis (1988) have detailed how the academy was “no ivory tower” during the McCarthy era, and how there was a “cold war on campus,” which compromised and undermined the academic freedom of faculty members in general.

Another dimension of the changed orientation of professors was that they developed a more national perspective. Therein lies a central thesis of Jencks and Riesman’s (1969) study of “the academic revolution.” As more and more faculty members received more and more research support from federal agencies, their orientation came to be more national in scope. Correspondingly, their work came to focus increasingly on issues of national concern, issues that would receive support from national, federal agencies. This national orientation is identified by Jencks and Riesman, as well as others, as being essential to the professional belief system; the argument is that a “universalistic” set of professional values is promoted over more parochial, context specific values. Thus, in their book, Jencks and Riesman recognize the continued existence of “other,” more locally and less universalistically oriented institutions, such as denominational colleges, women’s colleges, “Negro” colleges, and community colleges (or in their words, “anti-university” colleges). None of these “other” types of colleges is regarded very favorably by Jencks and Riesman, to put it mildly. They are characterized as being narrow and parochial, and their instructional personnel are tarred with the same brush. The preferred and dominant part of the academic profession lies in the nationally oriented universities, with their faculty members who are part of national associations and a national community, and who are as or more committed to their “cosmopolitan” associations as to their local institution and community (Gouldner, 1957).

With this more national orientation, in the post World War II era the academic profession came to be characterized by a national labor market. The classic study by Caplow and McGee (1958) captures some of the key features of that labor market. Focusing on an elite institution, a national research university, they aptly detail the norms and mechanisms of the academic labor market. For example, they emphasize that faculty recruitment is shaped not only by abstract, universalistic measures of merit but by a sense of whether in the national community a candidate is regarded as an attractive hire.

The existence of such a national labor market provides individual faculty members with an important source of independence and leverage *vis-à-vis* their employing institution. So, too, as Jencks and Riesman note, do the external grant funds that some faculty members can secure

from federal agencies. Those features of the profession are important for understanding the professional power of academics, within and outside of their institutions. And increasingly, those aspects of the profession become important to study — the nature of labor markets for the national and mobile segment of the profession, versus of other members of the professorate, and the areas and ways in which these nationally oriented, mobile, and grant getting faculty exercise professional authority within the institutions of higher education in which they work.

As many commentators have noted, the title and timing of Jencks and Riesman's work were ironic. Coming out in the late 1960s, "the academic revolution" could easily have been interpreted as referring particularly to the student protests, the civil rights movement as it was impacting the academy, faculty activism and the response it was generating from governance bodies, or simply to the rapid growth of student numbers at the time which transformed the country's higher education system to, in Trow's (1973) terms, one that had virtually "universal" access. This period, and subsequently the 1970s, was one in which the social movements and rapid economic growth and crises of the day, profoundly influenced the configuration and life of the American professorate.

The rapid growth not only of student numbers, but also of institutional numbers during this time period created a demographic "bulge" in the profile of the academic workforce (Finkelstein, 1984; Rhoades and de Francesco, 1987). Large numbers of faculty were hired in what was a job seekers market in the 1960s. And increased proportions of faculty members were working in the rapidly expanding sector of community colleges and comprehensive state institutions (Stadtman, 1980).

Not only were the numbers of faculty members growing, but there was an accompanying growing differentiation among types of faculty, in terms of their orientation to their work as well as their political views. Large numbers of faculty came into the profession with teaching as their primary interest and orientation. Working in the growing sector of locally oriented community colleges, and also comprehensive masters granting state colleges and universities, they were less tied to the federal agencies and national professional associations than were research university professors (Fulton and Trow, 1975). They also generally lacked the corresponding leverage and power on campus that these faculty members had. Ladd and Lipset (1975) further traced the divergent political views that characterized "the divided academy," though as a group faculty continued to be more liberal than other occupational groups (Finkelstein, 1984).

Another significant change that came to characterize the academic profession was the pressure to diversify the demographic profile of the professorate, particularly by ethnicity and gender. The civil rights and women's movements that were influencing employment practices in the larger society were also affecting the academy, where as Lionel Lewis (1975) so clearly demonstrated in his analysis of letters of recommendation, more than merit came into play. The so-called "culture wars" (Shor, 1986) that were played out in educational curricula also played out in the hiring of new faculty members, in affirmative action, tenure cases, and issues of chilly climate for new faculty members (Baez, 2002; Finkelstein, 1984). Moreover, increasing numbers of women began to be hired into the ranks of academe, an occupational realm that had provided limited opportunity to women generally, and particularly to women in science (Rossiter, 1995).

More than just changes in the ethnic and gender profile of faculty began to take effect. Just as increasing numbers of working class students began to enter the academy, so, too increasing numbers of people from working class backgrounds entered the academic profession. As with the students, they came to experience a culture shock of their own, feeling like "strangers in paradise" (Sackrey and Ryan, 1984).

Very shortly after the push to diversify the academy came the fiscal crises of the 1970s, and a constriction in the hiring of faculty. The academic labor market quickly became an employers' market in which in some fields there were literally hundreds of applicants for every position. The dramatically altered conditions of the labor market had a profound influence on the types of faculty who were taking positions in less prestigious, teaching oriented sectors of the academy. Such institutions were able to hire research oriented applicants who a decade earlier would not have considered such positions. Finnegan (1993) has traced the effect of these labor market changes in the differing strata of faculty in comprehensive universities, detailing how different cohorts of faculty in the same institution have very different orientations to teaching and research. Broad labor market developments then, like national and global social movements, can play out in profoundly important ways in the daily existence of and interaction among professors.

Now we have experienced yet another significant transformation in the larger economy. We have moved from an industrial to a post-industrial economy (Bell, 1973), in which the growth sector of industry is services. The shift to an information and knowledge based economy has involved the development of new sorts of production processes. Just as the existence of three and four credit unit courses based on the



Carnegie unit were a product of the industrial economy and standardized, mass production, so the new emphasis, particularly in the less prestigious sectors of higher education, on customized, interchangeable modules that can be delivered at various sites can be linked to the growth of high tech, just-in-time, individualized delivery of services in the broader economy. The structure of work in the academy is influenced by the structure of work in the larger economy. Increasingly, for example, the instructional activities of faculty members are being structured by course management software produced by companies such as Blackboard and WebCT; as education becomes another service to be managed and delivered through advanced information technologies.

In addition to a shift in the structure of the economy, there has been a significant shift in the political ideology that shapes the organization of that economy. The dominant perspective shaping public policy is neo-liberalism, emphasizing the reduction of public sector subsidies, the increased intersection between public and private sectors, with public entities becoming more responsible for generating more of their own revenues, and more accountable for their productivity and efficiency. The result is what Slaughter and Rhoades (2004) have described as “academic capitalism and the new economy.” The orientation and purposes of academic work are changing, with profound implications for faculty members’ commitments in teaching, research, and service.

Those changing purposes are particularly evident in the instructional programs of community colleges. If historically it made sense to contrast faculty members working in general studies/academic fields, with those who worked in vocational fields of employment, that simple bifurcation no longer captures the reality of community college faculty (Grubb, 1999; Seidman, 1985). Now it is necessary to disaggregate within the vocational programs between those that are connected to old economy occupations such as auto mechanic and those growing numbers of programs that are connected to new economy occupations, such as in many high tech and service sector programs in community colleges, many of which are more selective than the general, academic studies fields, and from which larger proportions of students transfer to four year institutions. At the same time, there is a tight connection between the preparation of students in these new economy fields and the workplaces in which they will be conducting their work. Necessarily, then, as the numbers of these faculty members grow, the orientation of faculty as a workforce in this sector is changing.

Moreover, the very production processes for developing and delivering courses, and for engaging in research and service, are changing

with the shift to an information-based economy. Part of that has been described by Rhoades (1998a) as a process by which academics are increasingly “managed professionals,” with academic managers exercising increased discretion in an expanded range of realms in the academy, including the basic strategic orientation of the academy (Keller, 1983). Part of it is also a process by which the internal managerial capacity of colleges and universities to connect with the market has been expanded, with the growth of non-academic, managerial professionals who are involved in producing and generating wealth from the intellectual work of professors and in a range of auxiliary services on campuses (Rhoades, 1998b; Rhoades and Sporn, 2002; Slaughter and Rhoades, 2004). The production of a course, or a student credit hour, now often involves a range of professionals in addition to professors. And the same is true of research, and of research products that are moved to the marketplace.

In short, the nature of the professional workforce in the academy has been changing dramatically. So has the nature of the professorial workforce. As in the new economy the general workforce saw an increase in part-time employment, so too in the professorial ranks, where the proportion of part-time faculty more than doubled in the last quarter of the twentieth century, from 22% of all faculty to around 45% (in some sectors, such as in community colleges, the figure is much higher, in the neighborhood of two-thirds of all faculty). Part-time faculty have received some scholarly attention from researchers seeking to identify different categories of part-timers, such as those who are otherwise employed and teach part-time on the side, and those who hold multiple part-time positions at multiple institutions (Gappa and Leslie, 1993; Leslie *et al.*, 1982). They also have received increased attention from faculty unions, which have been successful in mobilizing faculty in less prestigious sectors of higher education generally, and now are moving to organize less prestigious segments of the academic profession.

Indeed, the growth of various categories of academic employment off the tenure track has led to a new term, “contingent faculty,” and to a new energy in the labor movement. It is evident in the “new academic generation” (Finkelstein *et al.*, 1998) of new hires, a growing percentage of which are off the tenure track, and are women and minorities, meaning that there is a gendered and raced dimension to the changing working conditions of professors in the new economy, and in the negotiation between employees and employers to define those conditions. The growth areas of unionization are in these contingent sectors of professorial employment, including in graduate employees such as teaching assistants (Schmid and Herman, 2003). What is happening in this regard to

the faculty is what is happening to the larger workforce in the new economy.

Our purpose in providing this historical overview of the U.S. academic profession is to highlight the connection between developments in the larger society and developments in academe. We hope it has served to set the stage for the topical areas of literature that we review, which also build in a time dimension and a connection to the larger workforce and society. And we also hope it has framed and clarified for the reader why we now see faculty members as knowledge workers in the new, global economy.

#### ORGANIZATION OF THE CHAPTER

The body of our chapter opens with a treatment of one of the most heavily researched issues with regard to faculty, their time allocation between various work activities. Nearly 40 years of national surveys, dating back to the Carnegie survey of the late 1960s, have gathered data on the patterns of faculty time allocation by institutional type, faculty field, and various faculty demographics and characteristics. For the most part, that work has concentrated on the time allocated to teaching and to research, reflecting an enduring public policy issue. For decades, policymakers and academic managers, and correspondingly higher education scholars, have studied the balance of faculty effort allocated to various instructional and research activities. A central focus of our review, then, is to consider those issues and studies over time. What are the patterns over time in faculty time allocation by institutional type, and by demographic and other characteristics of faculty members? And what are the trend lines, if any, in terms of faculty preferences as to how they would like to allocate their time?

In addition, however, in recent years some studies have addressed faculty's involvement in relatively new activities, largely surrounding patenting and technology transfer. As universities have become more entrepreneurial, and have increasingly encouraged their professors to intersect more directly with the private marketplace, it makes sense to study the extent to which faculty are engaged in a range of such activities. Although there are a limited number of studies, they are important in that they expand our understanding of the new kinds of work activities in which professors are involved.

Finally, we offer some thoughts about how to enhance our understanding of faculty members' work. In conceptualizing faculty members

as knowledge workers in the new, global economy we suggest some new directions in thinking about when and where faculty members are conducting their work. For in the new economy, increasing amounts of work are being conducted at different times and work sites than has traditionally been the case.

A second set of research topics we focus on, which has also been heavily researched, is faculty salaries and labor markets, with a special emphasis on pay inequality. In the larger workforce in the U.S., the level of pay inequality has increased drastically. Because the forces driving these changes may also impact higher education, and because colleges and universities must compete with other employers for faculty, these general changes are quite important for the labor market for professors. We discuss these trends in the overall labor market and also outline trends and changes over time that are specific to higher education, and that could alter salary inequalities among faculty.

We review the literature on changes in pay inequality within the academic labor market. In detailing overall changes in inequality, we also focus on how differences in pay across institutional types and within the same institution have changed. In addition, we focus on patterns of variation and stratification by academic field, gender, and race/ethnicity of the faculty member. As well, we consider research that has focused on segmented labor markets.

Finally, in this section, we map some possible directions for future research. In particular, we discuss the need for research on the process by which pay inequality is increasing. For example, how is the compensation structure of professors influenced by initial salaries, merit adjustments, market adjustments, equity adjustments, and faculty retention packages? And to what extent do forces emanating from the greater economy shape these practices? Further, we offer thoughts about how to analyze the impact of the general shift to a knowledge-based economy. For example, is it useful to define areas of faculty work as more or less closely intersecting or representing new economy areas of employment, and then examining salaries and labor markets accordingly?

The third topical area that we explore with regard to faculty is international patterns of professorial employment and professional power. Although this is an area that has been far less studied empirically than the first two, we believe it holds increasing significance for understanding faculty and higher education in a global economy. A recent international survey of faculty was modeled on national surveys in the United States, and offers insight into various aspects of faculty life across countries.

However, in order to fully understand the findings of such surveys, it is important to address the very different organizational structures and historical patterns of professorial employment and power that define higher education systems in other parts of the world. In turn, that should shed light on the nature of professorial employment and power in the United States. We draw on two literatures to provide this perspective. Starting with work that defines the organizational configuration of professorial employment in European systems, we review comparative research on the different sorts of structures in which faculty members are employed in that system and beyond. We also review the considerable scholarship on patterns of professional power in the governance of higher education systems and organizations.

Finally, we map out possibilities for future research in this area. We point to the particular significance of professors' roles in higher education policy in some developing countries, using the cases of Latin American countries to highlight this role as well as to emphasize the importance of their linkages with various international organizations. In addition, we review literature that highlights the international networks of professors and the ways in which these can impact higher education systems. In both of these cases, we underscore the importance of attending to the global dimensions of faculty work, whether that consists of the international connections and activities of faculty members, or their involvement with various types of international agencies and organizations.

The fourth set of topics around which we review literature combine two quite different levels and foci of analysis: studies of the socialization of individual faculty members, and research on the collective involvement of professors in social and institutional change efforts. We juxtapose these two sets of perspectives to highlight the significance of the analytical approach that is adopted in studying faculty members. The more heavily researched of the areas is the growing literature on preparing the next generation of faculty members. Some of that work addresses the longstanding focus on attracting the best and the brightest into the academy — the driving questions of this work are how to most effectively replenish and prepare the next generation of faculty. Such questions are particularly important given the changing conditions of faculty work. Other work on socialization focuses particularly on the experiences of women and minority faculty members. Here the driving issues have more to do with the experiences of demographically diverse faculty in a profession that has been dominated by Anglo males.

A quite different perspective on the academy comes from literature

that addresses the collective activities of professors, particularly as they relate to promoting various sorts of social change in the working conditions and character of higher education institutions. This is a less heavily adopted perspective. But important examples exist of studies that speak to the collective efforts of women faculty and faculty of color to change the academy. Similarly, there is a small but important literature on the involvement of various types of instructional personnel, including graduate teaching assistants, part-time and contingent faculty members, and full-time, tenure track faculty members, in various unions. Such work highlights the changing character and growth areas of professorial employment in the new economy. And it highlights the role of employees not as simply being subject to such changes but as also taking an active role in shaping institutional direction and change.

Our chapter concludes with a brief discussion of the implications of the conceptualization we are utilizing to frame this chapter. We contrast our perspective with the dominant conceptual frames that have been adopted, and trace the implications of these for the sorts of questions we ask about professors. We then identify some alternative questions that could serve to enrich our understanding of faculty members, and of the changes we are witnessing in their employment, working conditions, and activities. In particular, we emphasize the significance of analyzing faculty members in the context of the broader political economy in which they are situated. In short, we conclude by offering thoughts about what we are coming to know and need to know about professors as knowledge workers in the new, global economy.

#### FACULTY TIME ALLOCATION IN THE U.S.

A major focus of research on faculty in the U.S. addresses the time allocation of faculty members between teaching and research responsibilities. Our review of this literature begins by briefly setting the stage with the historical roots of the faculty role as teacher and researcher. We then examine studies of faculty members' time allocation between teaching and research activities over the past four decades. Finally, we consider faculty work responsibilities in the recent political economic context of entrepreneurial colleges and universities in the new economy, offering some examples of new directions of research on faculty time allocation that may stem from a conceptualization of faculty as knowledge workers in a post-industrial world.

FACULTY WORK ALLOCATED IN THE U.S.: HISTORICAL CONTEXT

U.S. scholars have discussed varying historical periods from which emerged the academic profession in the U.S., ranging from the late 1700s to the early 1900s. In each of these time periods, significant changes in society and in higher education institutions led to changes in faculty roles and responsibilities and in the allocation of professors' time among various activities. Such structural changes laid the foundations of tensions among work responsibilities that would become heightened in contemporary times.

The 18th century marked the very early shaping of faculty roles, which were almost entirely focused on college teaching. Early American colleges followed a British model, and the instructors were tutors, who had various responsibilities for working with and overseeing students, including teaching them. Generally the tutors were graduates of the institutions who moved right into their tutorial role (Morison, 1936). By the late 1700s there were very few permanent faculty members, an estimated 105 in the entire country, serving in professorships that were often endowed in a particular subject area (Carrell, 1968; Finkelstein, 1984). Originally, these older professors' role was to oversee the more numerous tutors rather than to take on and teach classes themselves.

The 1800s brought a change in faculty roles, as professors came to outnumber tutors in American colleges, due in part to the growth in the size of colleges (Finkelstein, 1984; Rudolph, 1962). Moreover, throughout the 1800s there was an increasing emphasis on specialized knowledge in particular disciplines, coming in considerable part from the of German universities, where increasing numbers of professors had done their training (Tucker, 1984). As the curriculum expanded, presidents appointed professors to teach within specialized fields, changing the earlier pattern of hiring tutors who taught every single subject, in a college version of the little red schoolhouse where one teacher was responsible for all subjects and students. Increased college enrollments furthered this process. For much of the 19th century, most professors continued to be drawn from other careers (especially from the liberal professions of the clergy, law, and medicine). Yet over the second half of the 19th century specialized training and knowledge increasingly took hold (Finkelstein, 1984; Geiger, 2000). With these changes, the significance of the knowledge, relative to the moral and spiritual development and instruction of undergraduate students, became more and more important.

With the turn of the twentieth century came changes that would

make professors' responsibilities quite different from the past and augur the issues that now dominate policymakers' perspective with regard to the faculty role and time allocation. At this time, graduate education and academic research emerged as significant parts of the academic role (Clark, 1995), and the college curriculum expanded even further beyond its past as "a closed box" (p. 119) that had impeded specialized inquiry. Universities and colleges became places not just of instruction in subjects (which would come to displace the emphasis on moral and spiritual development) but also of inquiry (Clark, 1995). The period marked the establishment and development of public and private research universities, the purpose of which was in part "to advance knowledge" (Geiger, 1986). The German model of discipline-specific research took hold in the U.S. (Edwards, 1999; Veysey, 1965), where institutions developed the distinctive American organizational form of instruction-based graduate education. Research university professors were now involved in graduate and undergraduate instruction, and in research as well as teaching.

Moreover, particularly in the recently established land grant universities, professors were also responsible for various service and outreach activities. For some years, in most institutions professors had been involved in what Finkelstein (1984), building on Light (1974) refers to as the "external career" of professors, activities undertaken outside the institution in a professors area of expertise. However, much of this activity in the 19th century, for the significant majority of professors who engaged in it, consisted of involvement in civic affairs. With the turn of the century, the nature of this service was transformed as faculty members were called on to use their expertise in public service, for municipal, state, and federal government (Finkelstein, 1984).

Later developments between the two World Wars, and in the post World War II era would serve to further these patterns. Out of the increased governmental use of and investment in specialized university expertise came increased prominence of the academic profession (Clark, 1995; Geiger, 1993; Jencks and Riesman, 1969). Their expertise was in demand. And their scholarship was increasingly being valued as being relevant knowledge, for military and health purposes, as well as in other realms.

One of the central engines driving many of these changes was industrialization. As discussed earlier, Scott (1983) identified significant mechanisms by which corporate philanthropists effected the rationalization of academe, facilitating student and faculty mobility. Similarly, Damrosch (1995) suggests that the industrial revolution was the key



catalyst in the rise of the academic profession, which he describes as “the industrialization of academic life and work” as the academic field became “a new division of labor” (p. 28). Institutional missions changed from preserving culture to producing knowledge. And what was particularly valued was knowledge that had economic utility (Veysey, 1965), as epitomized by land grant universities that had schools of agriculture and mining. Damrosch also stressed the influence of free market competition spawned by the industrial revolution. Knowledge and curricula were connected to the demands of the rising industrial economy.

Eventually, particularly in post-industrial era in which state budgets became increasingly constrained, competition for external funding extended well beyond the pursuit of federal research dollars. In the latter half of the 20th century, private sector support of university research became more significant. Moreover, colleges and universities began to look more and more to generating their own revenues through entrepreneurial activities in the realms of research, instruction, and service (for a fee, instead of for free) (Slaughter and Leslie, 1997; Slaughter and Rhoades, 2004). As we shall address later, these developments have added another dimension of scholarly activity that needs to be explored in terms of time allocation — entrepreneurial activity.

The model of the research university affected other sectors of higher education. It also at the same time, along with private research universities, came to be increasingly separated from these institutions in terms of faculty work. A division of labor emerged in the missions of various institutions of higher education, with some focusing more on research and graduate education, and others, like the community colleges and public comprehensive colleges and universities that expanded in the latter half of the 20th century, focusing much more on teaching and undergraduate education. Despite this division of labor, there has been a countervailing pattern of “academic drift,” in which in the snakelike procession of American higher education (Riesman, 1958; Trow, 1984), the tail consistently tries to follow, and be like, the head institutions. Thus, colleges and universities that offer baccalaureate degrees seek to offer graduate programs, first at the masters and then the doctoral level. Institutions where faculty have historically done relatively little research encourage faculty members to undertake research.

Although different scholars offer different accounts and explanations of the emergence of academic departments and of the academic profession in American higher education, all of them agree that the faculty profession is influenced by various changing social and academic conditions. The major stimuli include the increase in student enrollment,

early German influences on research and scientific knowledge, the emergence of graduate programs, the industrial revolution, and growth in private and public funding for research. As a result, faculty members gained increasing prominence outside of their immediate institutional walls, thereby developing allegiance to a new and sometimes more prominent guardian, the academic discipline. The concomitant competing loyalties and overseers have resulted in the multiple, and sometimes competing, expectations of faculty work. These historical changes and institutional patterns have laid the foundation for the professor as teacher-scholar to experience an increasing tension between the range of work activities in which they are engaged.

Many of the contemporary issues facing higher education are rooted in these historical origins of the academic profession. Faculty are often criticized for their dualistic loyalties — to the discipline more than to the institution. Concerning the research university, Edwards (1999) explains that the way these institutions have developed has resulted in tensions between some institutional needs and goals, on the one hand, and some departmental activities and capabilities, on the other hand (Edwards, 1999). In a period of entrepreneurial higher education, in which managers emphasize productivity and efficiency, in the case of research universities faculty in a given department may align themselves more with the larger scholarly community in that field than with the revenue generating goals of the institution. Or they may come to identify themselves as entrepreneurial small businesspersons, whose innovation and creativity is being stifled by the bureaucracy and “taxation” of the central administration. Within institutions that are more teaching oriented there may be similar tensions between the goals of the faculty and the direction of the institution being charted by academic managers. Faculty members may align themselves more with the functions of the academic profession in providing quality education than with goals promoted by the institution to generate more credit hours in larger classes and more distance education.

In its present state, the organizational structure of a college or university has become increasingly complex and specialized as departments continue to divide and function relatively independently. The continuing growth of departments in modern day institutions has become a response for growing intellectual needs and concerns, through an accretion of additional units as opposed to extensive restructuring. Indeed, the specialization is such that Becher (1989) argues the historical developments of the 20th century have undermined any hope of developing a collective university culture. He reasons that the semiautonomous

department has become the basic element of most institutions with the broader national disciplines as the most strongly determining factor affecting how faculty operate. Similarly, Boyer (1990) maintained that as a result of departmentalism, the curriculum had become fragmented, leaving the educational experience lacking coherence. Out of such sentiments have come the recurrent policy deliberations and managerial initiatives over the past thirty years in relation to faculty members' allocation of time between teaching and research.

#### FACULTY RESEARCH AND TEACHING ALLOCATION

With the preceding in historical context in mind, in this section we review recent research and examine data in exploring how faculty work can be understood in contemporary times. Key questions that are addressed include, Are there any significant differences in faculty time allocation to research and teaching by disciplinary field or institutional type? How might demographics (i.e., gender, and race/ethnicity) differentiate patterns of time allocation among faculty members?

Faculty work allocation, for the most part, has been examined in terms of time spent on research and teaching. Most of the higher education literature treats the two activities as discrete dimensions of work, in contrast to Clark's (1995) understanding of the teaching/research nexus, or Colbeck's (1998) analysis of joint production activities that combine teaching and research (e.g., working with a student in a lab). For instance, using the 1988 National Survey of Postsecondary Faculty (NSOPF), Fairweather (1996) points to a negative relationship between time spent on research and time spent on teaching ( $-.62$ ) among faculty from all types of institutions.

The findings about time on teaching over time are more mixed than the general perception among policymakers would lead one to believe. Consistent with the general view, in examining this relationship over time, Finkelstein, Seal, and Schuster (1998) utilize NSOPF data to report that faculty time spent on teaching declined while time conducting research increased when comparing faculty in 1969 to faculty twenty years later. They also note that from 1969 to 1989, the percentage of faculty indicating a primary interest in teaching dropped from 76 percent to 72 percent, and faculty indicating teaching effectiveness should be the primary criterion for promotion dropped from 77 to 69 percent. They add that faculty in 1989 prefer to spend less time on teaching and more time on research compared to faculty two decades ago. Milem *et al.*

(2000) on the other hand, utilize ACE and HERI data and find that faculty time spent on research and on teaching activities both increased from 1972 to 1992 in all types of four-year institutions.

The findings about time on teaching depend on the measure one uses, and on the time frame. The data above refer to time on all activities related to instruction. But if the measure is classroom hours or student contact hours, not including class preparation or time spent advising, and if the time frame is 1975 to 1992, faculty time spent teaching undergraduates has remained essentially the same in research and doctoral granting universities, and has declined slightly in comprehensive universities (Finkelstein, 1995). And from 1987 to 1992, a time of considerable public criticism of faculty time spent on teaching, classroom and contact hours increased in all four year institutions except liberal arts colleges, where the time allocation remained the same (Allen, 1996).

More recently, 1989–90 and 2000–01 Higher Education Research Institute's (HERI) faculty survey of a different national sample of institutions show that between 1989 and 2001, time spent on teaching decreased while time spent on research increased (Astin, Korn, and Dey, 1991; Lindholm, Astin, Sax, and Korn, 2002). However, the percentage of faculty with a primary interest in teaching has remained relatively steady, even increasing very slightly from 72 percent in 1989 to 73 percent in 2001 (Astin, Korn, and Dey, 1991; Lindholm, Astin, Sax, and Korn, 2002). Moreover, another study of public research universities during this same time period found that a substantial minority of departments actually implemented increased teaching loads during this time, whereas very few reduced faculty members' teaching loads. And most units experienced an increased emphasis on the importance of teaching in the promotion and tenure process, though research remained the most important factor (Leslie, Rhoades, and Oaxaca, 1999). Finally, analyzing ACE and HERI data, Milem *et al.*, (2000) call into question the prevailing view about faculty and teaching, finding that where there are decreases, in research universities, they are due to reduced time spent on student advising.

The trend line data also tend to underplay the fact that overwhelmingly the academic profession is still a teaching profession (Finkelstein, 1984). As the data above indicates, the vast majority, upwards of two-thirds of faculty members nationally, have a primary interest in teaching and believe that it should be the primary criterion in their review. Moreover, in terms of absolute hours, the time spent on teaching still generally outweighs that spent on research, even in public research universities.

As might be expected, there are significant disciplinary differences in the allocation of time between research and teaching. Some scholars define those disciplines in terms of level of consensus about the paradigm defining knowledge in that realm. Studies tend to find that faculty members in so-called “high consensus fields” (i.e., chemistry, physics, and mathematics) generally tend to be more research-oriented than are faculty in so-called “low-consensus fields” (i.e., social sciences), who tend to have heavier teaching loads (Braxton and Hargens, 1996). (As we discuss below, other scholars attribute some of these variations to the demographics of faculty members in those fields; and still others define these fields more in terms of their relationship to external markets than to internal epistemological characteristics.)

Some additional analyses utilizing the 2000–01 HERI Faculty Survey elaborate these differences, as well as the overriding pattern, which policymakers often overlook. Faculty in the humanities spend significantly more hours per week teaching and preparing for teaching (i.e., English mean = 8.62), than do faculty in the social sciences (i.e., Social Sciences mean = 7.34) and sciences (i.e., Engineering mean = 6.82). Conversely, faculty in the sciences spend significantly more hours per week engaging in research (i.e., Engineering mean = 3.83) than do faculty in the social sciences (i.e., Social Sciences mean = 3.33) and humanities (i.e., English mean = 2.65). However, as the mean figures reveal, regardless of the field, faculty spend far more hours per week on instructional than on research activities, more than twice as much in the humanities and social sciences, and nearly twice as much in engineering.

Several explanations can be posed for the discipline-based differences. The amount of resources and value placed on discovering new knowledge correlates with the amount of time apportioned for research (Clark, 1987). Faculty in resource-poor departments, such as the humanities, are more involved with teaching and less involved with research in contrast to the resource-rich fields of physics and biology. The differences reflect the vastly different investment of the federal government in research in these fields. The humanities are less subsidized federally than are the sciences. Thus, faculty in the science fields (especially in research universities) tend to have a higher proportion of faculty with research grants, more research and teaching assistants, costly laboratories and equipment, and quite often, lighter course loads than faculty in the humanities and social sciences. Science faculty are also more likely to teach smaller-sized graduate courses, which are not only specialized but are inclined to relate to the faculty member’s research. For many scholars working out of any of a number of functionalist

**Table 2.1:** Comparing Teaching and Research Means by Institutional Type

Number of hours per week	Institutional type		
	Two-year colleges (N = 3,787)	Four-year colleges (N = 25,794)	Universities (N = 20,381)
Teaching (including preparing)	8.94*	7.97*	6.61*
Research	1.58*	2.53*	3.90*
*P < cleaned_tag differences include rank, tenure status, level of education completed, family responsibilities, and age.			

perspectives, particularly those working out of a human capital perspective in economics, discipline based workload variations reflect different “production functions”. As the argument goes, it is more expensive to teach engineers because of the equipment and in some cases because of class sizes that are required. Other scholars, working out of critical and feminist perspectives point out that those differences reflect different socially constructed valuations of what sorts of knowledge society chooses to subsidize and support. Above and beyond the effect of productivity and production functions, they refer to the halo effect of being in certain fields.

Differences in faculty time allocation can also be found by the type of institution in which the faculty member works. Consistent with the institutional missions, in comparing research and teaching by institutional types, faculty members in research universities spend more time on research than do those in other types of institutions (comprehensive, liberal arts, and two-year colleges), whereas faculty members in two-year colleges spend more time on teaching than do their colleagues in research universities (Boyer, 1990; Finkelstein, Sears, and Schuster, 1998; Sax, Astin, Korn, and Gilmartin, 1999). As shown in Table 2.1, the ANOVA results compare hours teaching and researching by institutional type. Clearly, faculty in two-year colleges engage in more teaching and less research than faculty in four-year colleges and university.

Nevertheless, holding such variables constant, there still is a gender effect in faculty time allocation. It remains to be determined the extent to which that effect is a matter of differential preferences or differential treatment in workload assignments.

There has also been a growth of faculty of color across all institutional types and disciplinary fields, although the increase has not been

**Table 2.2:** Comparing Mean Hours per Week Teaching by Race

Race	N	Subset for alpha = .05		
		1	2	3
African American/Black	1200	7.11		
Asian American/Asian	1940	7.28	7.28	
Mexican American/Latino	1277		7.44	
White/Caucasian	44833		7.49	
Native American	628			7.80

as significant as in the case of women faculty, who have increased from 17 percent to 40 percent of all faculty members (Finkelstein, Seal, and Schuster, 1998). As with women, it appears that faculty of color are characterized by distinctive patterns in time allocation in comparison to white faculty. Some research in comparing white versus nonwhite faculty suggests that although white faculty tend to produce a higher number of publications than nonwhite faculty, some groups of nonwhite faculty spend more time on research than white faculty (Antonio, 2002). Tables 2 and 3 further detail differences in faculty hours conducting research and teaching when disaggregated by race/ethnicity.

As with women faculty, the above differences are partly attributable to factors such as institutional type, disciplinary field, rank, and the like. Still, it appears worth exploring the distinctive effects of race and ethnicity on faculty time allocation, and to determine the extent to which they are matters of differential preference or differential treatment.

In closing this section on faculty time allocation between teaching and research, it should be mentioned that research on service is less available. Service is not only largely overlooked in faculty evaluations and in promotion and tenure decisions, it is also largely overlooked in

**Table 2.3:** Comparing Mean Hours per Week Research by Race

Race	N	Subset for alpha = .05		
		1	2	3
Native American	626	2.82		
African American/Black	1200	2.86		
White/Caucasian	44108	2.93	2.93	
Mexican American/Latino	1263		3.10	
Asian American/Asian	1927			3.96

the literature. One of the added difficulties in measuring service is a lack of consensus on what activities constitutes “service.” While some may consider faculty contact hours with students outside of class as one form (Milem, Berger, and Dey, 2000), others include paid consulting in the same category of “service” (Fairweather, 1996; Finkelsten, 1984; The Carnegie Foundation for the Advancement of Teaching, 1989). In essence, almost any professional activity outside of teaching and research can be labeled as “service.” Although the general term of service remains ambiguous, questions that directly ask about service provide us with some insight. According the 2001–2002 HERI Faculty Survey National Norms Report (Lindholm, Astin, Sax, and Korn, 2002), when asked to report the average number of hours per week spent on “community or public service,” about a third of all faculty report spending 0 hours, slightly over 50 percent of all faculty spend 1 to 4 hours, approximately 10 percent of all faculty spend 5 to 8 hours, and the remaining 4 percent spend 9 hours or more.

As with teaching and research, there are some differences by gender and race/ethnicity. When comparing men versus women, men participate in less “community or public service” than do women (65 percent versus 70 percent, respectively) (Lindholm, Astin, Sax, and Korn, 2002). Another survey reports a similarly sized gender gap, of more women faculty having “performed service/volunteer work in the community” than men (Antonio, Astin, and Cress, 2000). The same study indicates that faculty of color are more involved in service and volunteer work than white faculty. Also, Antonio (2002) reports that 49.6 percent of faculty of color have advised student groups involved in community service in comparison to 37.4 percent of white faculty. More faculty of color view providing services to the community, engaging in outside activities, influencing social change as “very important” than do white faculty (Antonio, 2002). Such differences by gender and race and the little value given to service when making promotion and tenure decisions may be a factor in the concentration of faculty of color in lower ranked positions with lower salaries.

While the lines distinguishing time spent on research versus teaching can be fuzzy, so can time spent on service versus teaching, particularly in the case of service learning. Faculty members who teach service learning classes not only educate students, but also tend to serve local needs within the institution or community. Questions arise as to how to recognize such efforts: Should service learning “count” towards teaching, or service, or both? And if faculty members conduct research on their service learning projects, how should time spent on a service learning



class be classified? Such ambiguity about the role of service learning in the reward structure might help explain why so few faculty are involved in service learning (Ward, 1998).

Difficulties in categorizing research, teaching, and service are further perpetuated when taking into account revenue-generating activities. While industry-sponsored activities are most often in the form of research, consulting can take the form of service. Increased pressures to generate revenue has the potential to largely reshape faculty work. Leslie, Rhoades, and Oaxaca (1999) found that in public research universities, external grant and contract funding has a negative effect on time spent on instruction and a positive effect on time spent on teaching and service. They also note that external grant and contract funding increases the probability of engaging in joint production, which supports the notion of the interrelatedness between teaching and research

#### FACULTY WORK IN THE NEW ECONOMY

The restricted focus of most research on faculty time allocation, on a simple dichotomy between teaching and research, ironically features a more industrial era focus on efficiency that does not sufficiently address post-industrial era changes in faculty work. In conceptualizing faculty as knowledge workers in the new economy, we suggest three basic paths that future research on faculty work should follow. One has to do with the type of activities research should address. A second has to do with the types of faculty employees research should address. And the third has to do with where and when faculty members are engaged in their work activities. Each of the above points speaks to patterns that define work in the new economy.

For the most part, not only do time allocation studies largely adopt a bifurcated focus on research versus teaching, they also adopt an insufficiently disaggregated focus on what is meant by research and teaching. Consider the case of involvement in entrepreneurial activities. The extent and impact of faculty entrepreneurial activity is arguably greater today than ever before (Slaughter and Leslie, 1997; Slaughter and Rhoades, 2004). However, thus far, the work that we find in this realm concentrates only on faculty involvement in entrepreneurial research or in consulting, and on the extent to which such activity takes away from time on teaching. Thus, some scholars question whether faculty members are able to maintain a commitment to the teaching while engaging in entrepreneurial research activities, adopting the same trade-off perspective as

that characterizing most studies of time allocation (Fairweather, 1996, 2002; Lee and Rhoads, 2004; Slaughter and Leslie, 1997). For example, Fairweather (2002) found that only 22 percent of university faculty members were productive in both teaching and entrepreneurial research, whereas about 50 percent of faculty members in research universities were productive in either entrepreneurial research or teaching. Bird, Hayward, and Allen (1993) found conflicts between academic and entrepreneurial activity in that among research science faculty, time spent on teaching and the number of courses taught diminishes the likelihood of being involved in entrepreneurial ventures. Conversely, faculty who obtain external funds for their research are often able to “buy out” of their teaching load and thus be able to devote more time to their research project. Institutions often hire less expensive instructors, sometimes part-time, and sometimes graduate employees, to fill in the teaching load. And these groups constitute a growing percentage of faculty members nationally.

Similarly, consulting has been negatively linked to time on instruction. Marsh and Dillon (1980) point out that the amount of supplemental income from consulting activities positively relates to research productivity but negatively relates to teaching activities. Perna (2002) finds that the percentage of time faculty members devote to teaching is negatively related to the likelihood of earning consulting funds. With increased entrepreneurialism, undergraduate and graduate students can be negatively affected as entrepreneurial and consulting faculty may be absent from the institution for extended periods of time. Such evidence is worrisome as The Carnegie Foundation for the Advancement of Teaching (1989) reports that the percentage of faculty having served as a consultant to private business or industry has increased steadily since 1975.

Too little research explores the nature of involvement and time allocation to various types of entrepreneurial research activities. Some of the exceptions chart the way for future scholarship. For example, Slaughter and Rhoades (1990) have examined the social relations surrounding science that are “re-normed” as faculty members get involved in entrepreneurial research; the nature of their involvement with students changes. Subsequently, Slaughter *et al.*, (2002) explored the ways in which faculty involvement in entrepreneurial research led to a “traffic in students” that redefined interactions between faculty and students. And Louis *et al.* (1989) studied life sciences faculty involvement with entrepreneurial research across a range of activities. Yet most of the above studies do not focus particularly on time allocation. We believe it is

important to get a more refined sense not only of what sorts of entrepreneurial research activities faculty are engaged in, and how that is affecting their relations with students (and with each other), but also what sorts of time they are spending on these activities.

The prevailing trade-off focus is interesting because part of the push for faculty members and higher education institutions to engage more directly with the private sector is grounded in the belief that such involvement will serve students well, by making faculty members, curricula, and higher education more responsive and relevant to the so-called real world. There are all sorts of joint production and mutual benefit studies that need to be done to explore that belief, and to understand faculty time allocation in more complex ways. For example, faculty members engaged in entrepreneurial research may spend less time with students in the classroom, but more time with students in important out-of-class realms. It's important to know the extent to which faculty interaction with students outside the classroom is in office hours on campus or is in off-site settings, or in settings that incorporate parties from the private sector.

The case of community colleges helps clarify the significance of this point, as well as of another, about the significance of exploring time spent on entrepreneurial instructional activities. One of the selling points of community colleges is that they have large numbers of faculty with experience in the private sector, who can more effectively prepare students for work in the "real world". Students are said to benefit from faculty engagement in consulting activity, for instance. Huber (1997) reports that 78 percent of community college faculty indicated having worked in some form of consulting, over half with educational institutions, one third with industry or business, a fifth with the local government, and a fifth with social services. Almost 30 percent of community college consulting faculty members were paid and about 25 percent perceived consulting as an economic necessity. That range of activity is important for understanding how faculty members spend their time. Rather than seeing it simply as a trade-off, as something that takes away from instruction, it is worth considering the extent to which there are joint production or mutual benefit dimensions to this involvement.

The case of community college faculty also raises the significance of focusing on entrepreneurial instructional activities. Slaughter and Rhoades (2004) see this as one of the key dimensions of "academic capitalism and the new economy"; partly through the expansion of instructional technologies, entrepreneurial activity in instruction is a

booming business. The most obvious example of this is distance education, and on-line, for profit ventures that have been and are being run by research universities such as Columbia University and the University of Maryland, College Park. But colleges and universities are also increasingly investing in high tech, on campus instruction, developing educational materials and software programs for managing courses that can be sold in the private marketplace. There is very little exploration of this high tech, new economy activity in the literature, which would help us more fully understand the dimensions of entrepreneurial activity in the academy. For the work on research on entrepreneurial activity has focused on quite a restricted range of disciplines. But there are other types of entrepreneurial activity in other fields, as Lee and Rhoads' (2004) work has demonstrated. They found that research entrepreneurial activities tend to take place most often among faculty in these sciences (i.e., Biology, Engineering, and Physical Sciences). However, faculty members in applied fields (i.e., Engineering, Education, Business, and Health Sciences) tend to participate in more consulting than faculty in the basic academic fields (i.e., Humanities, Math, English, and Biology) (Boyer and Lewis, 1985; Kirshstein, Matheson, Jing, and Zimble, 1997; Lee and Rhoads, 2004). And a large proportion of faculty in fields such as Fine Arts do so as well: Lee and Rhoads (2004) demonstrate that entrepreneurialism is an institution-wide issue: approximately 40 percent of faculty in the Fine Arts had engaged in some form of consulting activity.

The point is that our understanding of faculty involvement in entrepreneurial, new economy activities is incomplete. We have an inadequately disaggregated understanding of involvement in a range of activities, and of the relationship between that involvement and interaction with students. We also have an insufficient understanding of the time that faculty members are allocating to those activities.

Another gap in the time allocation literature lies in the types of faculty we focus on. Overwhelmingly, the focus is on full time, tenure track faculty. Yet the growth sectors in academic employment lay elsewhere, in part-time faculty members, and in a range of "contingent" faculty positions such as non tenure-track, full-time faculty members (Baldwin and Chronister, 2001). These map onto the growth areas of employment in the new economy, which is characterized by an increasingly casualized and contingent workforce. Although these faculty members may be more difficult to gather data on, they are an increasingly important part of the academic workforce, in instruction, research, and service. It is important for us to follow Baldwin and Chronister's lead in

focusing on the characteristics and work patterns of full-time, non-tenure track faculty members, exploring the time allocation patterns of these members of the academic workforce, by institutional type, discipline, and demographics.

It is also important to not simply treat these categories of faculty members as discrete, isolated members of the workforce. There are various questions surrounding the joint production activities of these faculty members, who often work in relation to or under the supervision of full time, tenure track faculty. Again, rather than viewing these faculty members as a trade-off, separated off from full-time, tenure track faculty, to fully understand faculty as knowledge workers in the new economy we need to examine their allocation of effort in realms involving joint work with the traditional faculty workforce.

Finally, we offer a few thoughts about the issue of work site. One of the defining features of new economy work is the increasing fluidity of the boundaries between work and personal space. In the general workforce, concepts such as 24/7 and telecommuting, facilitated by various communications technologies, point to the fact that more work is being done outside the formally defined workplace of an organization. Similar patterns apply to faculty members. The average hours per week that faculty members report working has been around the mid to upper 50s for several decades. And faculty members have long done some of their work in places and spaces outside of their offices and labs, and off campus. But with the increased use of new technologies, particularly in the realm of instruction, and interaction with students, we believe there is reason to believe that increasing amounts of time are being allocated to work that takes place off campus and outside of what would be regarded as normal working hours. Similarly, with the growth of sectors of faculty members such as part-timers, who have far less access to office space, there is good reason to believe that an increasing amount of academic work is being conducted out of the office and off the campus site. At the very least, there is good reason to gather data on time allocation that concentrates on when and where work time is allocated. How many hours per week are faculty members spending interacting with students on e-mail or on course management systems, and what proportion of those hours are spent in the office during daytime work hours versus at home or other off campus sites and/or outside of typical working hours? It is when we start conceptualizing faculty members as knowledge workers in the new economy that such questions come to mind.

## FACULTY SALARIES AND LABOR MARKETS IN THE U.S.

Many of the fundamental changes in the economy discussed earlier could directly impact the structure of compensation at colleges and universities. In this section we examine the extent to which salary differences among professors have changed, with an emphasis on the level of salary inequality. Because this chapter's central theme is that any analysis of faculty work requires consideration of forces that affect the labor market in general, we start by reviewing how salary inequality has changed for all workers.

The level of wage inequality in the U.S. has increased dramatically over the last thirty years (Card and Dinardo, 2002; Deere, 2001). Some disagreement exists over whether the increase occurred exclusively in the 1980s or the increase was spread over three decades. However, all scholars agree that wage inequality is much higher today than it was in the early 1970s.

Past research has provided two general explanations for this increase, with much disagreement existing over the relative importance of each. The first focuses on changes in institutions and policies such as the fall in unionization rates, the decline in the real value of the minimum wage, and expanded economic deregulation. A large body of literature provides evidence suggesting these forces were responsible for a substantial part of the overall increase in wage inequality (for example, DiNardo, Fortin, and Lemieux, 1996; Fortin and Lemieux, 1997).

The second explanation, commonly called the Skill-Biased Technological Change (SBTC) hypothesis, claims that a fundamental change in the economy has occurred that altered the relative demand for different types of workers. In particular, employers have increasingly valued skilled workers, driving up their wages relative to others. There is some variation among SBTC scholars in terms of whether they claim there has been an increase in demand along every dimension of skill (Juhn, Murphy, and Pierce, 1991, 1993) or whether there has been an increase in demand mostly for those workers who use computers (Autor, Katz, and Krueger, 1998).

Although it is likely that both explanations contribute to the increase in wage inequality among workers generally, the exact share to assign to each may not be crucial for our purposes because some of these explanations are not especially relevant for the specific case of the academic labor market. For example, the wages of faculty are not substantially affected by changes in the minimum wage. In addition, changes in the demand for different types of employee skill likely differ between

higher education and the general economy. Researchers have long suggested that the production process within colleges and universities is fundamentally different than other organizations precisely because it is so labor-intensive and not amenable to technological changes that enhance efficiency (Baumol, 1967; Bowen, 1967).

At the same time, some of these factors are quite relevant for academic labor. For example, there has been an increased valuation of techno-science, and a bias towards investment in these fields of academe (and thus in faculty working in those fields), both within higher education institutions and within federal and state government (Slaughter and Rhoades, 2004). In addition, the direction of unionization among faculty is the reverse of unionization in the general workforce — the ranks of unionized faculty have increased over the past forty years (unionization in academe emerged and expanded in the 1960s and 1970s — see Rhoades, 1998a). Finally, although in many ways colleges and universities are increasingly monitored by government in regards to quality and productivity, in other regards, particularly with respect to revenue generation, they have been deregulated, enabling them to act and become more like private sector enterprises.

Perhaps most importantly, the overall increase in wage inequality in the general labor market is quite important for higher education institutions because they must compete with other employers for faculty. We would expect those professors who possess skills that are increasingly rewarded elsewhere in the labor market to enjoy the greatest increases in academic salaries and those with less rewarding employment options to lag behind. In short, we would expect compensation practices in the academic labor market to respond and correspond to such changes in the larger labor market.

Other trends specific to higher education may also have served to promote greater inequality. For example, the increasing use of corporate management practices within academe has likely contributed to increased salary inequalities. There is some evidence that salary adjustments for faculty are increasingly based on not just merit but also on market criteria, which would heighten salary inequalities. Rhoades (1998a) has found that to be the case for unionized institutions. And in many non-unionized colleges and universities, across the board cost of living adjustments, as a share of total salary increases have declined, as adjustments are increasingly based on merit, and merit is increasingly defined in ways that limit the number of faculty who can receive increases. Moreover, in a period of increasingly entrepreneurial colleges and universities focused increasingly on revenue generation, the criteria used to

define what fields and faculty are seen as valuable and worthy of increased investment are also changing; fields of study that are perceived to have greater potential to generate revenue are especially favored, and this differential valuation has likely contributed to greater salary inequality among faculty (Slaughter and Leslie, 1997; Slaughter and Rhoades, 2004).

A change in the relative economic strength of different colleges and universities likely has played an important role as well. The stagnation in state appropriations has caused public institutions to fall substantially behind their private peer institutions (Alexander, 2001). Even within institutional type, inequality across institutions in their financial resources appears to be increasing, and the very different saving patterns across institutions will likely cause these disparities to grow in the future. These points have been demonstrated in a series of papers in the Williams Project on the Economics of Higher Education ([www.williams.edu/wpehe](http://www.williams.edu/wpehe)).

Such trends are likely to be important for at least two reasons. The first reason is obvious: institutions are constrained in their salary offerings by their level of financial resources. A second, less obvious effect may be the response of those institutions that are falling behind financially, but wish to remain competitive with wealthier institutions. Many of these institutions are increasingly seeking to provide competitive salaries for top faculty in only a few fields while forgoing increases for faculty elsewhere (Alexander, 2001; Leslie, Oaxaca, and Rhoades, 2002).

#### CHANGES IN SALARY INEQUALITY AMONG FACULTY IN THE U.S.

We now turn to a review of past research that details how the level of inequality in faculty salaries has changed over time. Very little work has thoroughly examined the overall level of pay inequality among professors, but a paper by James Monks (2003) that uses data from the National Study of Postsecondary Faculty (NSOPF) recently filled that void. Monks first demonstrates that salary inequality among professors grew between 1987 and 1992 and even more substantially between 1992 and 1997. He finds that the variance of the natural log of earnings, a common measure of pay inequality, increased by 40% between 1987 and 1998. Much of the increase was driven by especially large increases in the upper tail of the distribution containing the highest paid professors. Bell (2000) provides additional evidence that the wages of faculty superstars are growing by demonstrating that the mean salary for professors was growing faster than the median.



Monks (2003) decomposes the overall inequality for each year into the share due to differences in average earnings across institutions and the share due to inequality within institutions. He finds that roughly two-thirds of the inequality in any given year is due to differences within institutions. In addition, within-institution inequality increased by 49% between 1987 and 1998 while between institution inequality only increased by 29%. Because most of the previous work examining salary inequality focused solely on the growing inequality between institutions, this finding suggests that the estimated increase in pay inequality is quite larger than previously thought.

Much of that previous work focused on the growing salary differential between public and private institutions. Salaries at private schools grew relative to their public counterparts for the 1980s and early 1990s, but this gap remained relatively constant during the late 1990s (Alexander, 2001; Hammermesh, 2002). The most extreme disparities were among Research I Universities (using the 1994 Carnegie classification), where by 1998 professors at public universities earned only 77.4 percent of what their counterparts at private universities earned. The corresponding figure for 1980 was 98.1 percent (Alexander, 2001). This trend is not surprising because state funding to public institutions stagnated during much of the 1980s and 1990s with a brief respite during the economic boom of the late 1990s. While publics did increase other sources of revenue, the increases did not close the private-public gap. Thus, tuition increased at similar percentages for both types of schools over the period, but private institutions benefited more from tuition increases because they had a larger increase in actual dollars because of their larger tuition levels at the beginning of the period (Ehrenberg, 2003a, 2003b).

Regardless of the cause, the growing salary gap between public and private institutions will make it difficult for publics to attract and retain top professors. Zoghi (2003) finds that the lower salary increases at publics were not offset by increases in other nonpecuniary benefits. Because Ehrenberg, Kapser, and Rees (1991) demonstrate that professors are less likely to continue at a school when their salaries are lower, it is not surprising that Ehrenberg (2003a, 2003b) finds that continuation rates were indeed lower at publics relative to privates during the 1990s.

Other work demonstrates that inequality in average faculty salaries is increasing across institutions within both the public and private sectors (Ehrenberg, 2003a, 2003b). Bell (2000) provides evidence that much of the increase in inequality is due to the highest-paying institutions moving even further ahead of the others. Closer examination of these trends

suggests that much of the increasing inequality across publics is due to growing inequality in state appropriations and much of the increase across privates is due to growing inequality in endowments (Ehrenberg, 2003a, 2003b).

We know much less about within-institution inequality, which is troubling because as discussed above, most of the inequality in any given year as well as most of the change in inequality between 1987 and 1998 is due to differences within institutions. Monks (2003) is the only author that attempts to directly tie the level and change in within-institution inequality to different faculty characteristics. He finds that when controls for a faculty member's rank, experience, tenure, and seniority are added, the within-institution variation of earnings is reduced by 40 percent and the increase in this measure over time decreases by approximately one-third. Adding controls for field or gender, race, and citizenship do not dampen the increase in within-institution inequality, though controls for field do reduce the level of inequality by approximately 10 percent.

Much more research has examined pay differences by these faculty characteristics as the central part of the analysis, as opposed to just a possible explanation for within-institution inequality. The annual survey by the College and University Professional Association for Human Resources provides the data most commonly used to describe salary differences across fields. A review of a survey from any individual year demonstrates tremendous heterogeneity across fields. For example, professors in legal professions and studies received \$109,478 on average in 2003/04 while the counterparts in liberal arts and sciences, general studies, and humanities received an average salary of \$52,234 (Smallwood, 2004). Pay inequality across fields grew between 1976 and 1987 (Hamermesh, 1988), and the trend continued into the 1990s (Rhoades, 1998a).

The most studied aspect of faculty salaries regards differences by gender. Aggregate data for all full-time faculty members at degree-granting institutions of higher education demonstrate that the average salary for women is around 20 percent lower than that received by men. This pay gap has been remarkably constant between 1972 and 1999, with a small increase in the early 1980s and a similar-sized decrease in the mid-1990s (National Center for Education Statistics, 2002, Table 235). These trends differ from the general labor market, which experienced a narrowing of the male-female pay differential during the 1980s and early 1990s (Blau and Kahn, 2000).

Barbezat (2002) provides a thorough review of the numerous studies that examine the size of the pay differential between genders that exists

after controls for other determinants are added. Unlike the aggregate trends discussed in the previous paragraph, these studies often focus only on faculty at four-year institutions. In general, once controls are added for other predictors of salary such as highest degree, experience, number of publications, field, and institutional type, a gap (often called the unexplained gap) of around 10 percent still exists. While the inability to add controls for important unobserved determinants of salaries may result in these estimates over-stating the degree of discrimination, underestimates will occur if the included controls hide structural discrimination. For example, the low-wages exhibited by fields populated by women even after controls for outside job opportunities are included suggests that some of the differences by field reflect gender discrimination (Bellas, 1994, 1997).

The size of the unexplained gap has appeared to change somewhat over time. Estimate from 1969 provide a gap of 10–14% while estimates from various points during the 1970s produce a much lower range of 6–10% (Ashraf, 1996; Barbezat, 1989; Ransom and Megdal, 1993). Studies using data from the 1980s and early 1990s demonstrate that no substantial reduction in gender inequality occurred during this period (Ashraf, 1996; Barbezat, 1989; Ransom and Megdal, 1993; Toutkoushian, 1998a). Recent evidence, however, indicates that by 1998, the unexplained pay gap between men and women was down to approximately 5% when the above-mentioned controls are added (Toutkoushian and Conley, forthcoming).

Barbezat (2002) also reviews the literature examining differences by race and ethnicity for faculty. Much of the evidence suggests that African-American faculty earn slightly more than their white counterparts after controls are added (Ashraf, 1996; Barbezat, 1989, 1991; Bellas, 1993). The small number of African-American professors — recent estimates indicate they compose approximately 5 percent of full-time faculty — may be the driving force behind this premium as institutions attempting to diversify their faculty compete with generous salary offerings. Hence, the positive salary figures may not be especially comforting for those seeking racial equality. With the exception of Monks and Robinson (2000) and Toutkoushian (1998b), very little work has examined salaries for other racial and ethnic minorities, so no general consensus has emerged on differences.

For levels and changes in both within- and between-institution pay inequality, it is important to consider whether or not the faculty members of an institution are unionized. Much research has examined the extent to which faculty at unionized institutions enjoy an earnings premium.

Among those studies that compare average salary levels across unionized and non-unionized institutions, no consensus emerges. Approximately half find a positive return to unionization and the other half find no significant impact on faculty salaries, or in a few cases, a negative impact (Monks, 2000). Studies that use individual-level data that allows controls for a faculty member's characteristics and productivity find more consistent results. In all cases, the return to unionization is positive, but the size of the premium varies between 0.5 and 14 percent (Ashraf, 1992, 1997; Barbezat, 1989; Monks, 2000).

Much less evidence exists regarding how unionization affects within-institution pay dispersion, but some impact is likely. Researchers have long believed that unions reduce the dispersion of worker's salaries within an institution or industry (Freeman, 1980). Differences in the average salary between unionized and non-unionized institutions of higher education in 30 fields of study provide some limited evidence supporting this claim. The five fields where faculty members enjoy the largest union premium (Liberal Arts and Sciences, Library Science, Philosophy and Religion, Arts and Music, and English) are all fields in the lower end of the pay scale at most institutions. At the same time, the two highest paid fields among the 30, Engineering and Business/Marketing, received the third and fourth smallest union premium (Clery and Christopher, 2004). It is important to note, however, that pay at unionized institutions is far from being completely standardized. Merit and market considerations are part of salary adjustments at unionized institutions, and market considerations are becoming increasingly important over time (Rhoades, 1998a).

#### SEGMENTED LABOR MARKETS

To this point, our discussion of salaries has treated faculty as members of one general labor market. Academic labor markets, however, are segmented along numerous dimensions, most notably, discipline, institutionalized tasks (teaching versus research), job status and institutional type (Breneman and Youn, 1988). With regard to the latter point, we have far too little understanding of the extent to which professors can move among different institutional types in the Carnegie Classification scheme — for example, from comprehensive masters granting to research universities, from non-selective to selective liberal arts colleges, and so on. Ted Youn (1992, p. 108) notes that segmentation causes “workers within a bounded area to engage in only limited competition with workers outside and/or to have only limited opportunity to

move outside these institutional boundaries". We discuss some of the implications of these divisions for faculty and how we study them.

As discussed above, discipline or field is a major determinant of salary and growing in importance. But salary is only one of several benefits that a faculty member receives, and one needs to consider additional items to fully understand the true distribution of resources across faculty members. To demonstrate the importance of this point, consider the size of start up costs incurred by Research and Doctoral universities after hiring a new professor. Ehrenberg, Rizzo, and Jakubson (2003) estimate that the mean start-up costs in several science disciplines (Biology, Chemistry, Engineering, Physics and Astronomy) vary from \$390,237 to \$489,000 for assistant professors and from \$700,000 to \$1,442,000 for senior faculty. In general, evidence suggests that institutional support for research in the sciences has expanded, restricting the funds available for other activities within the institution (Ehrenberg, Rizzo, and Jakubson, 2003; Slaughter and Rhoades, 2004). Faculty members in these fields are operating in quite a different labor market than are faculty members in fields like Education, English, and Sociology. More research is required on these dimensions of market segmentation.

Almost all of the work summarized earlier focuses on one segment of the academic labor market, that for full-time tenure-track faculty. Such analysis does not reflect the changing work patterns emerging in the new economy, most notably the increasing numbers of part-time and contingent employees. Colleges and universities have not been immune from this trend. Ehrenberg and Zhang (2004) find that between 1989 and 2001 at four-year institutions, there has been an increase in the share of full-time faculty that are non tenure-track, the share of all faculty that are part-time, and the share of new-hires that are non tenure-track. In each area, the increase has been substantial. For example, the ratio of part-time faculty to full-time faculty has increased from .269 to .365 for public institutions and from .499 to .622 at private institutions.

The growing share of faculty members that are not full-time and on the tenure-track means that the change in salary inequality among all faculty is quite different than the estimates presented above. The primary reason is that part-time faculty members receive much lower wages than their full-time counterparts. Gappa and Leslie (1996) find that in 1992 full-time faculty earn \$4,000 per course while part-time faculty only earn \$1,500. A question that arises is the extent to which the part-time, contingent, and full-time faculty members are working in separate labor markets. Although there is little research on this topic, it

is likely that institutional type matters. Thus, moving from part-to-full-time status is not uncommon in community colleges; but in doctoral and research universities, such a move is probably unlikely.

Salary differences by field and job status have important implications for female faculty. The share of faculty that are women varies dramatically across fields, from 6% in engineering to 51% in education for full-time faculty in 1992 (Toutkoushian, 1999). Job status also differed by gender. Among full-time faculty, women are more highly represented among those not on the tenure-track (52%) than those on the tenure-track (43%) (Perna, 2001). In addition, 51 percent of women faculty members were employed part-time in 1992, compared to 38 percent of men (Toutkoushian and Bellas, 2003).

In general, researchers need to consider the various labor markets for faculty within higher education and adjust the methodology used to address their existence. Recent work by Wagoner (2004) provides a good example because he considers differences by job status, field, and the interaction between them in his study on community college faculty. Wagoner examined how the demographics, compensation, and satisfaction vary between part-time and full-time community college faculty members. Importantly, he disaggregated all of his work by field groupings to capture a more nuanced understanding of how the well being of faculty differ by job status. In particular, a central part of that understanding was related to the new or old economy status of various occupational and technical fields.

Wagoner's satisfaction results are typical of his overall findings. First, he finds that in general, part-time faculty are much less satisfied than full-timers in more academic areas while the opposite occurs in more vocational areas. However, fields are further disaggregated within each of these categories to reflect the quite different external labor market opportunities across fields as well as the varying importance placed upon different fields by the institution. While differences are not as stark as those between the academic and vocational areas, some differences do exist. For example, the gap between part-time and full-time faculty is substantially smaller in the hard sciences relative to other academic areas. In addition, among the vocational fields, only part-time faculty in lower status, social service professional areas (such as education and nursing) are less satisfied than their full-time counterparts. Although the distinction between faculty in old economy vocational realms (e.g., auto mechanic, plumbing) and those in new economy fields (e.g., computer technicians) did not yield powerful differences, the method still offers considerable promise for future research. Overall, Wagoner's results

clearly demonstrate that any analysis treating faculty as one distinct labor market may simply produce the average of very different underlying labor markets.

#### FUTURE WORK ON FACULTY SALARIES AND LABOR MARKETS

Our review of the literature reveals that pay inequality across institutions and across faculty members at the same institution has grown in recent decades. The increased dispersion of faculty salaries in academe, and the existence of segmented labor markets that may to some extent contribute to that dispersion, match the pattern of the larger labor market in society. In tracking these changes, and relating them to developments in the new economy, we have offered a conceptualization of faculty members as knowledge workers in a knowledge based economy. Several lines of future research can be derived from this conceptualization.

Past work has provided several insights into the forces driving the increased inequality across institutions, yet there is much work left to be done. For example, there is a growing disparity between the salaries of faculty members in public and private institutions. At what point and in what types of institutions will this pattern lead to segmented faculty labor markets in the U.S. (one for the public sector and another for the private sector) which are found in some other countries, such as Mexico? And what are the ripple effects of competition between lower tiers of private universities with public research universities for faculty, in terms of salary distributions within institutions?

That leads to a second line of future research. We know relatively less about the forces driving increased salary disparities within institutions. There is much empirical work on the growing corporatization of higher education. There is a general sense that one of the changes that has come with more entrepreneurial colleges and universities is the rising use of corporate practices within higher education, and the greater reliance on merit and market considerations, relative to cost of living, in setting and adjusting faculty salaries. Although merit and market considerations have long been a part of the compensation process in higher education (Hansen, 1988), their importance has grown, as has their definition and operationalization (Rhoades, 1998a). Yet we need studies that will systematically track the application of merit and market criteria in faculty salaries. For all the talk about the importance of the market, there are virtually no studies that actually sufficiently incorporate



market considerations and mechanisms into their analysis of faculty salaries and substantiate the belief and clarify the processes by which external labor markets affect academic salaries (see Bellas, 1994 for an exception). Similarly, although cost of living adjustments remain a prominent part of faculty salaries in unionized settings, we lack studies that empirically track the proportionate weight of cost of living, merit, and market adjustments in faculty salaries, not to mention equity adjustments, in unionized versus non-unionized institutions, and in different Carnegie types. What types of institutions have increasingly relied upon merit and market considerations in setting salaries, and to what extent have they done so? Have definitions of merit or market substantially changed? And how is equity defined — is it in terms of faculty members' race and ethnicity, or gender, for example, or is it a matter of responding to phenomena such as salary compression?

The latter question points to a phenomenon of major policy significance in institutions that will be heavily influenced by increased reliance upon market mechanisms in setting salaries. New faculty members are getting paid more than faculty who have been at the faculty for several years, resulting in wage compression and small or negative returns to seniority. Most studies have found a negative return to seniority at the institution for professors, all else equal (for example, see Bratsberg, Ragan, and Warren, (2003) and Ransom (1993)). But we know little about how this form of compression is changing as market considerations increasingly determine salary levels.

Many institutions have implemented equity adjustment policies in recent years. Many of these policies have as much or more to do with redressing market-induced salary compression as with gender and race/ethnicity equity. Here too, lies another path of important future research. What is the balance among the monies allocated for equity adjustments versus for merit increases versus for market adjustments (e.g., for making counteroffers)? In the authors' institution, there have been years in which the monies for equity adjustments were one-tenth of those allocated in merit based increases, thereby almost ensuring the continued and even enhanced disparity among salaries. There have been other years in which faculty retention packages have constituted a substantial portion of all monies allocated for faculty salary increases. We lack systematic data on and study of these phenomena, within and across institutions.

Despite there being a good deal of work on minority and women faculty members' salaries, there is very little work that relates patterns of inequities to patterns in the larger workforce. Why does the gender



gap in faculty salaries in academe appear to be higher than it is for many other professions? If women and minorities are in such demand in external labor markets, a claim that we often hear in regard to the “difficulties” of finding and recruiting women and minority graduate students and faculty members, why has that apparently not translated into a market effect that raises the salaries of women and minority faculty? Again, we lack studies of the mechanisms by which such market considerations come into play in affecting faculty salaries.

A major feature of the post-industrial economy labor market is the increased prominence of part-time and contingent work. As we have indicated before, a similar pattern characterizes the academic labor market, and women are disproportionately impacted by that pattern. A larger proportion of part-time and contingent faculty are women than is the case for full-time faculty. That raises important questions about the segmentation and stratification of salaries for faculty according to the terms of their labor.

The configuration of the new economy labor market also offers some possibilities for field-based comparisons in faculty salaries. In looking at the salaries of faculty in four year institutions scholars have long focused on differences among academic fields, comparing discipline based fields, or comparing fields in terms of aggregations having to do with certain epistemological (e.g., hard/soft, pure/applied) and normative (high consensus/low consensus) dimensions of the fields. In looking at the salaries of faculty in two-year colleges scholars have often compared academic and vocational fields. By foregrounding the significance of transformations in the information based economy, we should begin to develop ways to categorize fields in terms of their connection to new versus old economy occupations, and compare salary patterns accordingly. Such categorization can be applied to the faculty of four as well as two year institution faculty.

In placing faculty salaries in the context of salaries in the larger labor market, we also offer a useful measure for describing and understanding patterns in wages. It might make sense to index faculty salaries against the salaries of comparable professionals in the larger labor force. It also might make sense to index them against the salaries of the increasing number of other, managerial professionals (Rhoades and Sporn, 2002) on campus, as well as of various types of campus administrators.

Finally, by way of segue to the next section of our literature review, we pose the following question. In a global economy, what can we say about global and regional labor markets? To what extent and in what

ways are faculty salaries in the U.S. affected by the fact that American colleges and universities recruit international students, postdocs, and scholars for faculty positions? And what are the patterns of salaries by the faculty members' nation of origin?

#### INTERNATIONAL PATTERNS OF PROFESSORIAL EMPLOYMENT AND PROFESSIONAL POWER

Scholars and policy makers in developed and developing countries often take the U.S. as the main reference point for analyzing the standards, organization, characteristics and production of national higher education systems. Even high-income countries such as the Netherlands and Sweden are in significant ways peripheral to the U.S. (Altbach, 2003). Certainly there are other influential systems historically and regionally, such as France, Germany, Japan, and the United Kingdom. And it is possible to refer to “gigantic peripheries” in the world system, such as India or China, and regionally, Brazil and Mexico in Latin America and South Africa among African nations. Nevertheless, the U.S. is still the principal worldwide “center” and defining model for higher education. And that centrality applies to understandings and studies of professors as well.

As we will point out throughout this section of our chapter, the Anglo-American bias of the literature is problematic given the nature of higher education systems and of academic employees in other parts of the world. We start then by contrasting the model of organization for U.S. professors, versus that which has predominated in Western Europe and much of the rest of the world. We then address a major empirical cross national study of faculty that remains largely embedded in this distinctive U.S. model. Subsequently, we delineate the ways in which the new global economy affects professors in other latitudes including high and low income countries. We discuss some of the implications of the idea of academics as global knowledge workers, some of the academic conditions and the new forces in higher education coordination around the world. Finally, we offer some thoughts about how adopting a different perspective on the role of faculty members internationally affords us new understandings of academics.

#### WORLDWIDE PATTERNS OF PROFESSORIAL EMPLOYMENT

Worldwide, there are at least 3.5 million professionals involved in postsecondary education worldwide, providing services to approximately

80 million students (Task Force on Higher Education Society, 2000). Not all of the 3.5 million are faculty members. Indeed the categories among professors are very different. The ranks vary, and comparisons among countries can be quite problematic. In some countries for instance, the concept of tenure does not exist in the way other nations have it; Russia is an example of this situation (Smolentseva, 2002, p. 354). In many countries, following a European model, professors have historically been civil servants, although this is beginning to change. In fact, the very term, academic “profession” is problematic.

The defining terminology in comparative higher education, like the dominant language, is Anglo-American. Scholars analyze the academic profession. Those professors work on “campuses” and in academic departments. They are “faculty”. Yet most of the world follows a very different model of academic organization. Neave and Rhoades (1987) have detailed many of those differences. The idea of academics as independent professionals, autonomous from the state is a distinctly Anglo-American concept. It does not capture the essential reality of professors in other national systems of higher education, for these faculty members are quite explicitly employees of the state, with the protections of civil servant status. Although this is changing even for full-time academics, it is important to understand the differential starting point of academic organization globally. Similarly, professors in many parts of the world are organized according to a chair system, not a departmental one (Clark, 1983), with very important implications for career mobility and the organization of resources and work. In many systems, moving up the faculty ranks is not simply a matter of successfully passing through various reviews within the employing college or university. One can only become a professor, a chair, if one opens up. And the structure of the career path may be such that as in Germany, you must not only compete for the chair in a national process, you must change institutions. Moreover, resources and perks are far more concentrated in senior faculty in a chair than in a departmental system. In short, there is much to be gained from approaching comparative higher education not from a U.S. perspective, but from the standpoint of exploring very different ways of organizing academics and work.

Still, as Altbach (2003) observes, “with more than 600,000 academics, the United States is home to the world’s largest academic community, perhaps 25 percent of the world’s total” (p. 144). And the leading role of American higher education has to do not only with its size but also with its wealth and worldwide influence. That influence is partly

evident and expressed in prevailing models of comparative higher education.

The most recent and largest study of international faculty was conducted in Boyer, Altbach, and Whitelaw's (1994) International Survey of the Academic Profession. This particular survey follows the model of the Carnegie Foundation surveys of U.S. faculty members. It provides comparable data about faculty attitudes and activities across 14 countries (Australia, South Korea, Japan, Hong Kong, Brazil, Chile, Mexico, the United States, England, Germany, the Netherlands, Sweden, Russia, and Israel), all of which are in well-developed systems of higher education. The points of analysis reflect the prevailing focus of such survey research in the U.S.

Thus, there is a focus on demographics, and particularly on the relative positions of male and female faculty members. The findings reveal that most academics are male and that male faculty tend to hold the highest degrees and occupy the highest academic ranks in comparison to female faculty. They are also mostly middle-aged, employed full-time, and in the middle class in their respective countries.

Reflecting scholarly concerns and policy issues in the U.S., the survey also focused on job satisfaction and time allocation. Altbach and Lewis (1996) found that most academics across the globe share a positive sense about their working conditions, particularly in regards to the intellectual aspects of their job but are dissatisfied with classroom space, resources, and equipment. Faculty in Hong Kong, Netherlands, the United States, Sweden, and Germany, however, are less critical. In regards to how faculty allocate their time, teaching is the primary activity for most faculty members, although a significant proportion of faculty prefer research. Unlike the U.S. (and Brazil, Chile, and Russia), where faculty report a primary interest in teaching, the majority of faculty in Japan, Sweden, the Netherlands, Germany, and Israel, report a primary interest in research. Overall, the international respondents reported spending up to twenty hours per week in teaching activities and ten hours per week in research activities when classes are in session. Many faculty reported no hours at all on service, with the exception of Brazil and Mexico, where faculty spend up to ten hours or more in service activities, findings that are suggestive of a distinctive commitment to social service in Latin American universities. Although the survey does not enable us to detail types of service, there is good reason to believe that the nature of such service in Latin America is quite different from that in the U.S., and is more oriented to the community than to career.

Typical of the U.S. industrial model focus on individual employees'

productivity, the international survey provides cross-national comparisons in research output. While international faculty share a strong commitment to research, they publish relatively few books and articles. Half of the respondents had not published a book in the past three years and the mean number of articles published in the past three years was just under six (Altbach and Lewis, 1996). Reasons for the low rates of publication may include lack of research funds and equipment (Altbach and Lewis, 1996), promotion criteria (Altbach and Lewis, 1996), and the added task of translating articles in English (as most of the top-tier journals across fields are in English). It may also be a matter of different sorts of output, such as reports, being valued over publication in peer review settings.

If we turn to the issue of internationalization, perhaps the most disturbing results in regard to U.S. faculty have to do with their international interests, such as working or publishing in other countries. U.S. faculty are the next to lowest group supporting a more international curriculum with only 45% in favor of this orientation (Boyer, Altbach and Whitley, 1994, p. 19). U.S. faculty also have the lowest percentage of academics reading books or journal articles published abroad. The survey raises some interesting questions about internationalization, as an institutional process of incorporating international and intercultural dimensions to the activities of higher education. As such, it is an important consideration in an increasingly global society, though it is best understood “as a response to globalization (not to be confused with the globalization process itself), and as including both international and local elements” (Knight, 2003).

The construction of international networks is a relevant aspect for these groups of scholars who are on the international crest of the wave, especially in developing countries. Having the chance to meet and work with prestigious international scholars does not, however, automatically mean building up a relationship with them or becoming part of their networks. For that step to occur, it is necessary to utilize cultural capital and other skills such as being fluent in another language (Maldonado, 2004).

The ways internationalization and globalization impact higher education are not only related to the production of knowledge, but also the shaping of policies, international, national and institutionally. The function that evaluation has played in the standardization of some indicators to value academic work and to make international comparisons is a topic that deserves more future research. And it requires us to move beyond the nation specific, cross-national focus to explore regional and

global entities, mechanisms, and processes, which have thus far been largely overlooked by scholars.

Relatively new, global instruments of influence, which emerged after World War II, are international organizations such as the World Bank and the OECD. Analyzing their agendas and recommendations addressed to developing but also developed countries show the extent to which the U.S. influences higher education policies around the world (Burnett, 1996; Kapur, Lewis, and Webb, 1997; Lauglo, 1996). In addition, there is a direct influence of the U.S. in the finance and governance of these organizations, which translates to the U.S.'s direct participation in these organizations. The U.S. influence can be recognized in the topics promoted, types of institutions, experts participating in the reforms, university organization and networks created (Maldonado, 2004; McGuinn, 1997; Samoff and Carrol, 2003).

#### MODELS OF PROFESSORIAL POWER

It is important to recognize, however, that before the U.S. was consolidated as a hegemonic model, the first European universities, especially the University of Paris, and later the Humboldtian university, set the example for the rest of the world. Born in 1079, Abelardo was the first symbol of the university professor as an intellectual. According to Schachner (1938), the University of Paris reached a position of intellectual preeminence because of Abelardo. The example is significant since the Paris model became the hegemonic model worldwide. In Paris, faculty had the authority to rule the university, whereas in Bologna the students had the control of the university.

The differences between the concept of professors as intellectuals and professors as knowledge workers are significant, historical and contextual. They also begin to point us to one of the great benefits of comparative work, effecting fuller understandings of the various roles that academics can play in terms of exercising influence nationally, culturally, and politically. By looking at academe in other countries, we can in some cases more clearly see the ways in which faculty members can be more than employees of college and university enterprises, independent professionals. Instead, we come to see them as significant national players in the construction of culture, class, and social policy.

Knowledge workers is a category more similar to cultural and class based analysts than to the traditional idea of intellectuals. Gramsci (cited in Crehan, 2002) says "the mode of being of the new intellectual can no

longer consist in eloquence, which is an exterior and momentary mover of feelings and passions, but in active participation in practical life, as constructor, organizer, ‘permanent persuader’” (p. 143). This notion of symbolic analysts corresponds more to concept of knowledge workers in non-peripheral universities around the world. Describing the “three jobs of the future,” Reich (1991, p. 178) offers the conceptualization of “symbolic-analytic services” who:

“[S]olve, identify, and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually transformed back into reality. The manipulations are done with analytic tools, sharpened by experience. The tools may be mathematical algorithms, legal arguments, financial gimmicks, scientific principles, psychological insights about how to persuade or to amuse, systems of induction or deduction, or any other set of techniques for doing conceptual puzzles”.

(The other two jobs are routine production services and in-person services — both services in the new, service versus manufacturing based economy.)

In 1979, Gouldner divided intellectuals in two groups, the first formed by those whose intellectual interests are fundamentally “technical.” The other are whose interests are “primarily critical, emancipatory, hermeneutic and hence often political” (Gouldner, 1979, p. 48). If the concept of intellectuals is used to understand the transformations from the first university professors to present, the current group is closer to the Gouldner’s first category than to the second. And that matches the sort of economic transformations that we are witnessing globally.

If internationally, professors have had a more clear and significant national role in society, that pattern is changing. Previous sections have detailed transformations experienced by professors in the U.S., particularly from the industrialization era to the present — such as diversification of academic positions, professionalization, specialization, privileging of certain areas, and the rise of part-time and contingent faculty members. Such developments have also characterized academe in most of the countries around the world, though there are always important contextual variations.

Since the decade of the eighties, major changes took place because of the application of neoliberal policies, the global economy impact and the internationalization processes (Puiggrós, 1999). Neoliberalism has been defined as the resurgence of some of the principles derived from

classical economic liberalism, particularly the socio-economic aspects. Under neoliberalism, there is the belief that the free market is able to correct any distortion in society or the economy. Other main assumptions of neoliberalism are concerned with the need to reduce the role of the State and its responsibilities and fostering the privatization of all the public sectors possible, and the conviction that individual efforts are the main possibility of progress in society. Those patterns have profound implications for the role of professors.

The main impulse of neoliberalism worldwide took place initially in the United States and England, under the regimes of Ronald Reagan and Margaret Thatcher, at the beginning of the eighties (Ashford and Davies, 1991; Galbraith, 1987; Jiménez, 1992). In higher education, neoliberalism has represented in developing countries, the reduction of public expenses; these economic policies have obliged institutions to find alternative sources of financing and to increase the privatization policies. In this context, the commercialization of higher education services is a key topic, especially the regimes promoted by the General Agreement on Trade in Services (GATS) (Barrow, Didou-Aupetit, Mallea, 2003; García Guadilla, 2003).

Within the context of global competence, knowledge production has acquired some new dimensions. Specialization and integration are two main components in knowledge utilization and its economic impact (OECD, 2001). However, there are more profitable areas than others; *knowledge* is valued differently.

“Changing economic and social conditions have given knowledge and skills — human capital — an increasingly central role in the economic success of nations and individuals. Information and communications technology, globalization of economy activity and the trend towards greater personal responsibility and autonomy have all changed the demand for learning. The key role of competence and knowledge in stimulating economic growth has been widely recognized by economists and others” (OECD, 2001, p. 17).

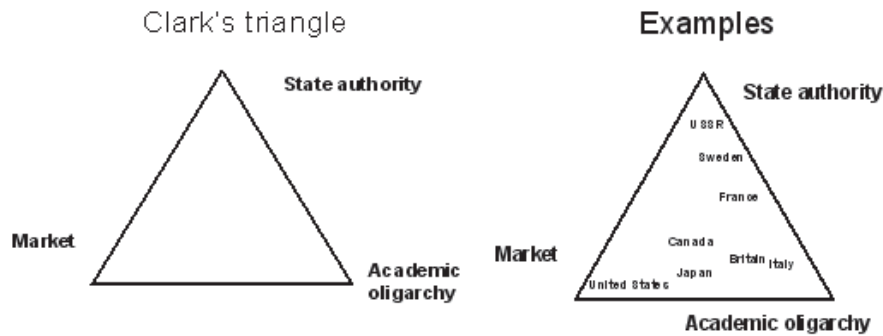
There are two important themes to explore in regard to the global economy affecting faculty worldwide: (1) new forces influencing higher education systems and (2) the way these forces are transforming the organization and faculty classification in higher education institutions. The next subsection explores these two aspects.

#### HIGHER EDUCATION FORCES: OLD AND NEW TENDENCIES

Clark (1983) suggests a triangular model of coordination in higher education, the three forces are: state authority, market and academic



**Figure 2.1:** Original Clark's model of higher education coordination and some examples



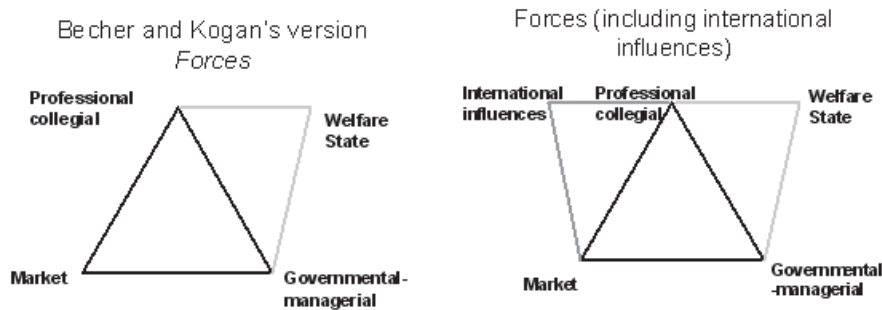
Note. From *The higher education system—Academic organization in cross-national perspective*, by B. Clark, 1983. Berkeley, Los Angeles and London: University of California Press.

oligarchy (see Figure 2.1). State authority refers to national higher education systems mainly organized by the State. It is related to the political and bureaucratic level. Market can be defined as competence. In Clark's model it is synonymous to non-governmental regulations in higher education; it is about market interaction at that educational level. Academic oligarchy is used originally by Clark to characterize the power of academics nationally, as well as in their institutions. Such academic oligarchy has historically had the predominant role in higher education systems, over the market or the state authority. Countries with chair systems typically are under this type of coordination (Clark, 1983).

According to the triangle model, scholars generally suggest that U.S. higher education is more oriented to the market than European countries such as France or Germany or Sweden, which are closer to State authority. Italy and Britain are closer to the academic oligarchy. The U.S. together with Japan and Canada are more oriented to the market.

Later, Becher and Kogan (1980) presented a new version of these forces including professional collegial, welfare state, governmental managerial, and market. This version suggests dividing what in Clark's version was originally the state authority in two: welfare state and governmental managerial. The difference is distinguishing the state power (which refers to the social responsibilities of the state) and the governmental managerial (which refers to the governmental and institutional governance) (see Figure 2.2). This division is particularly useful to explain European countries and at some extent Latin American countries because of the

**Figure 2.2:** Becher and Kogan's version and model including international influences



Note. From *Process and structure in higher education*, by T. Becher and M. Kogan, 1980. London: Heinemann Educational Books.

type of centralized national states that exist in most of these regions. And there is another element that other authors have suggested including: globalization forces. As Scott (2000) says: “Not all universities are (particularly) international, but all are subject to the same processes of globalization — partly as objects, victims even, of these processes, but partly as subjects, or key agents, of globalization (p. 122). Thus, authors such as Cloete (2002) have suggested globalization should be integrated in the original Clark’s model (see Figure 2.2).

Some international influences affecting higher education can be understood as globalization or not, depending on the context. For instance, the impact of international organizations can be conceived as part of globalization processes, but it also can be analyzed as intervention or neocolonization (Bennell, 1996; Burnett, 1996; Coraggio, 2001; Samoff, 1996). Another force that has been added recently to the original Clark triangle is the civil society, which is also has had an important global dimension with the development of transnational NGO’s.

In Clark’s original model, the market has two dimensions, national and international. However, international powers can be defined beyond international markets; there are influences in terms of policies, financing, research agendas, and networks (Maldonado, 2004). This is a main reason to consider markets and international forces separately. Epistemic communities are an example of the complexities of new scenarios, where networks and influences go beyond the original representation of three settings (State authority, market and academic oligarchy) but to a more connected idea. Epistemic communities are defined as a “network of professionals with recognized expertise and competence in a particular domain an authoritative claim to policy relevant knowledge within that

domain or issue area” (Haas, 1992, p. 3). This concept suggests an emphasis in the interconnection among academic oligarchy, welfare state, and international influences (specially represented with supranational organizations). There are networks that interconnect these elements including the participation of more than one force. The point here again is to move beyond a model of professors as individuals in national systems, to conceptualizing them in terms of epistemic groups that exercise influence locally, nationally, regionally, and globally. Such a perspective leads us to very different questions about knowledge workers in a global society than come out of old industrial era models of time allocation, productivity, and pay.

Beyond the concept of “academic oligarchy,” academics today can be conceived as knowledge workers, symbolic analysts, experts, and intellectuals. Considering oligarchy literally means a political system governed by a few people, as Clark’s idea refers to the small group of academics that control the decision in their units or departments, it is about the group of faculty that are influential at the university (normally a small group). In some cases, the influential groups are those who are on the crest of the wave academically. In the new scenarios of evaluation and proliferation of international standards to define quality, the level of internationalization of a faculty member has become a very important element. And academics are playing very significant global roles in shaping practices in other national systems.

In this sense, some faculty can be defined as knowledge workers, but not in all contexts and not all current knowledge workers are exclusively academics in higher education institutions. The situation for most academics is different between developing and developed countries. It is important to place these knowledge workers within a global economic context. The goals of scholars in low-income countries are often related largely to survival, although in some regards they may be more influential in their own national systems than are faculty in more developed countries.

A good example, which relates to the changing stratification of faculty power, not only within Northern countries, but between the North and South is the numbers of part-time faculty members. Full-time professors are a category that has become rare in some nations. International experiences show a global tendency for hiring more part-time professors, which is heightened in developing economies. For instance, in Mexico the percentage of total full-time faculty is 30%, in China 39.97%, in Korea 45% and in India an average of 50% (Chen, 2002; Gil Antón, 2002; Jayaram, 2002; Lee, 2002). The costs for hiring

full time professors are high and it includes offering social security and benefits. The consequences of the differentiation are economic as well. As the Task Force (2000) accepts, “faculty pay is generally very low in relation to that offered by alternative professional occupations” (p. 23)

This situation is not exclusively in developing countries; there are similar cases in high-income countries. For instance, in 1992 Great Britain had 82.4% of full time faculty and 17.5% part-time but by 2000 the numbers were reported as only 57.2% full-time (Shattock, 2000, p. 54). According to Chevaillier (2000) the situation in France has not been very different, “a few years ago, some universities expanded more than half the recurrent funding for instruction on part-time and overtime teaching” (p. 83).

Other data in regards to faculty appointments show other disparities. In Malaysia, only 5.6% of faculty members are professors, 18% associate professors and the rest are lecturers (Lee, 2002, p. 148). Among all Gulf universities in 1988, there were only 29.8% senior academics and 35.3% assistant professors; the rest were considered non academics (34.9%) (Mazawi, 2002). In Poland, 19% are professors, 61% are associate and assistant professors and about 18% lecturers and instructors (Kwiek, 2002). In Russia, 37% are docents, 23.1% lecturers, 21.7% instructors and assistants, and the rest other positions such as department chairs (Smolentseva, 2002). Another example is Nigeria where associate professors and readers represent 14.5%, 23.2% senior lecturers and senior research fellows, lecturers and research fellows 36.9%, assistant lecturers and junior research fellows 17.4% and tutors and instructors 8% (Iyegumwena and Ekwutozia, 2002). Focusing on such structural dimensions of the academic labor force, as knowledge workers, in a global context, raises very different questions about productivity than those that come out of a focus on the output of individual faculty members.

Full-time contracts and professor status are two basic conditions for participating in the group that is able to produce knowledge. If these are two conditions for being part of the academic international oligarchy, it seems difficult that higher education institutions in developing countries can at least guarantee the minimum conditions to generate a group of knowledge workers that can compete with groups locate in the centers. Quoting Altbach (2000), “the traditional full-time permanent academic professor, the ‘gold standard’ of academe, is increasingly rare” (p. 1).

There have been other important transformations in the organization of higher education institutions. The U.S. departmental model has been imitated in other countries, with advantages and disadvantages. It provides more autonomy to academics, organization around disciplines

more than around programs. Some national governments have decided to transform their traditional chair organization by departments following the U.S. model. In countries like Germany, the model is very hierarchical and corresponds to the historical development of higher education institutions in that country. Other systems, such as the Argentinean, are organized by chairs. In Mexico, some universities have been established following this model. This is an interesting future research topic, the organizational transformations in the context of global economy and particularly the way these modifications are affecting faculty worldwide.

#### FURTHER RESEARCH

Most peripheral nations will be unable to expand their public higher education systems and institutions. Private sectors of higher education are emerging in the global economy, partly as a result of neo-liberal policies being advanced to “structurally adjust” the higher education systems of developing countries (Maldonado *et al.*, 2004). More research is needed to explore the labor conditions for faculty members in these growing settings. So, too, the changing and declining role of senior professors in these countries, who are being replaced by lower status, part-time knowledge workers, as we are finding in other parts of the economy, offer much opportunity for further analysis. One point along these lines is that in a context where technological and scientific discoveries are quickly developed, the chances for peripheral countries to compete and produce knowledge as it is produced in developed nations, such as the U.S., are being increasingly compromised by the changing composition of the academic workforce. It is likely that inequalities between the North and South will deepen in this context. And that structural focus on stratification of knowledge production is a topic that is relevant within all national contexts as well, between geographic regions of a country, and among types of institutions, as we see heightened stratification and hierarchy in higher education.

Major international organizations have produced several documents about the importance of knowledge in current societies — the World Bank, the OECD, and UNESCO. The World Bank publishes a report on knowledge societies (World Bank, 2002), discussing the present significance of knowledge. Of course, every agency has its own agenda; in the case of the Bank, which is one of the most important international agencies worldwide, there are 5 principal issues: brain drain issues, international quality assurance framework, trade barriers, intellectual

property rights and bridging the digital gap. This agenda is an example of the principal worries from an economic orientation with respect to knowledge. By contrast, for some developing countries, a key concern is how to use knowledge to provide more equity in their societies or how to use knowledge production as a development tool. In either case, adopting a global perspective on faculty members as knowledge workers suggests a very different set of questions than the prevailing perspective in the U.S. literature.

In the international agenda defined by many organizations and entities focused on the economic role of higher education, *academic freedom* is not seen as an important issue; even when it can be definitive in the development of some higher education institutions, since there are countries where academic freedom is very restricted. The situation is different in every region and among different countries, Arab, Latin American, Asian and African nations. “Most African governments are intolerant of dissent, criticism, nonconformity, and free expression of controversial, new, or unconventional ideas” (Teferra and Altbach, 2003, p. 11). Three clear examples in different moments are Algeria, Kenya and Ethiopia. In Latin America, military coups have resulted in the closing of universities, the exile of scholars, and even death. Academic freedom is a topic that results more important for other types of organizations such as International Amnesty than for the World Bank. However, in the framework of the new global economy, the role of knowledge has more to do with economic and productive aspects than about the social dimensions of its production and impact. Again, an international perspective raises this issue, which is important in various national and local contexts. How is redefining professors as knowledge workers in the new, global economy changing our commitment to some basic functions and purposes and values that have historically attached to professors and higher education?

Finally, we offer a thought about the increasing commitment of faculty members and institutions to a “global” frame of reference. We see this as having the potential to mirror on an international level what Jencks and Riesman described in terms of a national perspective of faculty. It is increasingly clear that an “international” orientation is largely defined in terms of foregrounding the global, and what is valued in the global, English speaking economic and professional markets, and putting in the background distinctive local and regional identities, issues, and commitments.

## SOCIALIZING FACULTY AS INDIVIDUALS, AND FACULTY ACTING COLLECTIVELY, AS AGENTS OF SOCIAL CHANGE

The literature reviewed in this section of our chapter addresses issues that are much less well developed in terms of empirical research than is the case particularly for studies of faculty time allocation and salaries. Here we have intentionally juxtaposed two quite different literatures that highlight the significance of conceptual frameworks in leading to very different lines of research around what broadly defined is a similar issue, the role of faculty as social agents in an intellectual community. This should serve as a segue into our closing remarks about the importance of conceptual frameworks in guiding the sorts of questions we ask about faculty members.

One perspective in the higher education literature regards faculty members as individuals who are part of a system that they need to be socialized into. The dominant framing question is how to attract, socialize, and retain the best faculty into the higher education community. Not only functionalist scholars, but also those who identify as critical and/or feminist scholars have conducted research around this question.

A second perspective in the literature regards faculty members as social actors who individually or in groups work to challenge and change the system. The framing question that comes out of this perspective is how faculty position and organize themselves politically to advance certain orientations about the conditions and purposes of academic work. Again, that same question can be asked by scholars working out of different theoretical frameworks, from labor to feminist to critical race theorists.

In exploring the literatures within each of these two perspectives we connect our discussion to questions that emerge when we consider faculty members as knowledge workers in the new economy. How does the conception of a knowledge based economy affect the way we think about socialization of and social action among faculty members?

We start, though, with the case of one piece of research to underscore the different academic and policy implications of adopting the two perspectives we identified above. Ben Baez (2000) has written an important article on faculty of color and “critical agency” through service. In addressing the service activities of faculty of color Baez critiques the prevailing perspective, which is that these faculty (and women faculty) are unfairly burdened by having heavier service responsibilities than Anglo faculty. The prevailing wisdom is that faculty of color should lighten their inequitable service load so as to be better able to succeed

in their academic careers. Baez challenges this view based on two considerations. First, some service activities of faculty of color involve challenging and changing higher education institutions, in ways that reduce racism, enhance opportunity for the historically underserved, and potentially transform the higher education system. In treating faculty of color primarily as individuals trying to succeed in their careers, most scholars have underplayed the very significant political role these faculty can play in reforming their institutions. To ignore that role and counsel reduced critical agency is to contribute to the perpetuation of a deeply problematic social system in higher education. (That is not to say that Anglo faculty should not also seek to reform the system with social justice oriented service. They should. But historically they have not done so in substantial numbers, and change has been dependent on faculty of color.)

A second consideration that Baez points out is that for many faculty of color their race oriented service is an important source of connection in their professional lives. To view service only or primarily in terms of time allocation is to overlook the importance of meaning and emotion for faculty members. It may be that for some or even many faculty of color, reducing their race related service would be counterproductive not only from the standpoint of institutional change, but also from the standpoint of the individual faculty members satisfaction and fulfillment in their professional lives.

Baez' work can be contrasted to the interest of many higher education scholars in the recruitment, socialization, and retention of faculty members, to ensure the renewal of the academic profession. With some important exceptions, the principal focus is on the individual faculty member within the individual college or university. Finkelstein *et al.* (1998) represent a key exception here in that they address the renewal of the profession; their analysis is of the reconfiguration of the faculty workforce, from a largely full-time, tenure track profession to one that is increasingly part-time and/or contingent. For these scholars that bodes ill in terms of what it means for recruiting high quality graduate students into the academic profession, a perspective that Bowen and Schuster (1996) also adopted in writing of the professorate as a "national resource imperiled."

There is an irony in faculty becoming an increasingly contingent workforce. Although we are in a knowledge economy, it is far from clear that faculty members are deriving commensurate rewards as knowledge workers despite being central players in this new economy. Instead, their



pattern of employment, of increased casualization, appears to be mirroring that of many workers at the lower ends of the stratification system, in the global economy, and in global cities (Sassen, 2001).

Much of the literature on faculty socialization, particularly in the field of higher education, approaches the study of socialization from the standpoint of the organization as a whole. To a considerable extent it addresses what Tierney and Rhoads (1993) have called “the organizational stage” of socialization. (For exceptions, see Smart, Ethington, and Feldman, 2000, on “academic disciplines and academic lives”, and John Braxton’s work on faculty members’ socialization into the norms of academic disciplines — Braxton and Hargens, 1996; also see Braxton and Bayer, 1999, on the socialization of faculty members into the norms of teaching, by institution, and by discipline). That has meant addressing institution wide problems that academic administration can address. For example, Sorcinelli and Austin (1992) provide examples of various sorts of programs that can be established to support junior faculty, ranging from “teaching fellows programs” to mentoring programs. Along similar lines, Boice (1992) has spoken to the need for more structured faculty development programs for new faculty, based on extensive empirical data drawn from studies of junior faculty. Moreover, Tierney and Bensimon (1996) have identified various organizational changes that their interviews with new faculty suggest would be useful in enhancing the culture of the organizations and the community experienced by junior professors being socialized into the profession. The organizational perspective that these authors adopt is consistent with much of higher education literature generally, which has historically sought to speak to academic leaders, an aspiration that has heightened in recent years, with several presidents of the Association for the Study of Higher Education calling for scholars to do more policy relevant research.

In recent years, that work has concentrated on faculty of color and women faculty. In general, the research tends to address the adverse experiences that such faculty face in entering the academy. Depending on the perspective of the author, those experiences may be characterized in terms of racism and sexism or as a chilly climate (Glazer-Raymo, 1999; hooks, 1989; Kelly and Slaughter, 1991; Padilla and Chávez, 1995).

Some studies have shown that women faculty experiences are more “acculturated” than “socialized” into the profession in comparison to male faculty (Reynolds, 1992). In other words, women faculty tend to be forced to assimilate to a contrasting culture, whereas male faculty tend to more easily acquire the norms, values and behaviors of a congruent culture. Similarly, faculty of diverse racial/ethnic backgrounds are

more likely to be acculturated rather than socialized to the profession as well. These distinct processes of faculty socialization demonstrate the need to better understand the very diverse experiences of underrepresented faculty.

A range of other studies identify additional structures and obstacles that women faculty (and in some cases, faculty of color) confront. Indeed, an increasing number of studies on faculty have addressed the importance, yet difficulties, in hiring and maintaining diverse faculty. While all new faculty encounter obstacles in their socialization process, the challenges are even greater for women faculty and faculty of color. Not only is women's occupational development more complex than men's (given the greater effect of marital and family roles, as well as challenges of negotiating gender in the workplace), both women faculty and faculty of color encounter greater obstacles than do Anglo male faculty members in identifying role models, mentors, and peers with similar backgrounds (Baldwin, 1996). (Such challenges are not restricted to women and faculty of color in the U.S., but also exist for women and faculty of color internationally — see Mabokela, 2002).

Empirical work is emerging in the field that addresses issues of “balance” (between work and private life) and role conflict particularly for women faculty with children (see Ward and Wolf-Wendel, 2004, and Wolf-Wendel, 2000). In part, this work recognizes the existence of an “ideal worker” model that is male, presumes a domestic economy managed by a spouse, and thereby disadvantages women. However, this work does not focus on the social and political actions of women faculty to try to change that. Rather, most of the work that identifies obstacles for women faculty and faculty of color identifies various practical suggestions for colleges and universities to help enhance the socialization and retention of more diverse faculty.

Some research points to the relative lack of senior female mentors as another obstacle to women faculty's smooth socialization and successful mobility in their careers. For example, women faculty report fewer networking opportunities than their male counterparts (Rose, 1985). They indicate few ties to their previous institutions and that their current networks are not very effective. Women faculty tend to participate less than male faculty in the professional and social circles that are so crucial to success and promotion (Tierney and Bensimon, 1996). A relative disadvantage in terms of social capital not only creates added barriers in understanding the tenure process and obtaining letters of support for tenure, but also reduced opportunities to engage in entrepreneurial

activities, such as consulting, getting grant funding, and building relationships with industry. Acquiring such supplemental income has become increasingly important to augment faculty salaries that have lagged relative to salaries in other professions. For these reasons, junior women faculty and junior faculty of color become further disadvantaged in the new economy.

Despite all this work, the scholarship on faculty socialization is relatively limited in several regards. One is that although there are important exceptions, there is too little research on the socialization of graduate students, as the future academic workforce. Particularly given the changes that are taking place in the new economy workplace of faculty, it makes sense to determine the extent to which future faculty are being prepared for these settings. This “anticipatory socialization” (Tierney and Rhoads, 1993) involves initiation into the norms of the academic profession.

Some scholars have laid a foundation for further exploring graduate student socialization. For example, Wulff and Austin (2004) have mapped out suggestions for enhancing “paths to the professoriate”. In this work, various scholars report on various sorts of data regarding the perceptions of graduate students. A few of the contributions focus on the particular challenges confronted by graduate students of color. For the most part, however, Wulff and Austin’s book, as with most work in this vein, concentrates on more general issues of preparing graduate students for faculty roles, with a particular emphasis on addressing how to better develop graduate students’ skills in instruction, how to develop “teacher scholars”, reflecting again the influence of the Carnegie Foundation for the Advancement of Teaching, and the work of Ernest Boyer. The focus on developing better teachers is part of a more general policy and managerial effort to enhance teaching in the academic profession.

Yet what is lacking in this work is a sufficiently developed analysis of graduate students’ socialization into the cultures of the academic fields in which they work. Conceptually, there is a recognition that disciplinary cultures are important in the socialization of new faculty (Austin, 1990). However, empirically, there is simply not the corresponding design of studies addressing future faculty members’ socialization into their academic fields (for an excellent exception see Traweek’s 1988 feminist analysis of socialization into the field of high energy physics). Nor are there studies that focus on the changing nature of disciplines, and the implications not only for graduate students but also for faculty who are already in the field.

There are related limitations to the work on the normative structure of the academic profession, which has recently concentrated on teaching norms. The largest contributor to this literature is John Braxton, who has also addressed research norms and misconduct in his work (Braxton, 1986). Braxton and Bayer (1999) offer an important and extensive analysis of norms and social control by peers in collegiate teaching, analyzing norms by institutional type and academic discipline. The tendency, though, in this functionalist work is to not sufficiently address new economy changes as they relate to instruction and research. How does the commercialization of science and of educational materials affect professors' conceptions of their research and of the curriculum they develop (for an exception, see Slaughter and Rhoades, 1990, 2004). How does the increased utilization of technology in instruction, and the changing delivery systems for presenting and distributing instruction play out in the retraining and resocialization of faculty members?

At this point, we would like to offer an alternative perspective on the role of faculty members as social agents. The prevailing view focuses largely on the assimilation of faculty members into existing academic communities, very much following the functionalist models of student persistence that prevail in the field. But what if we conceive of faculty members instead, as active political agents, involved in challenging and changing the intellectual communities that they are entering, or of which they are a part? What if we were to focus on the micro and macro politics of academe?

There is relatively little literature in the field that adopts this perspective. So here we feature a couple of pieces of research as examples of the sort of questions and studies that are possible if one adopts a different conceptual framework for thinking about faculty. In the realm of gender and race/ethnicity, there are several studies of faculty members surviving the academy, and some of these address particularly the micro politics of faculty of color and women faculty negotiating success (e.g., Gregory, 1995; James and Farmer, 1993; Turner and Myers, 2000; Washington and Harvey, 1989; Witt, 1990). Here we discuss a few examples that rather than treating women and faculty of color as marginalized and isolated, struggling to survive, instead examine the ways in which they are major players in social change.

One arena in which faculty members can shape change is in the curriculum. There is little question that the expansion of numbers of women faculty and faculty of color has translated into changes in the higher education curriculum. But that translation has not been an easy or natural one. It has involved the active struggle of groups of women

and minority faculty to establish feminist and critical race based scholarship and curriculum as legitimate areas of study. At the organizational level, that struggle has played out most obviously in the establishment of programs and departments in women's studies, African-American studies, Chicano studies, and more recently Gay and Lesbian studies. The political struggles surrounding the establishment of these units drew on the force of larger social movements (Slaughter, 1997) and involved not only faculty but students (Rhoads, 1998).

A less visible, but equally difficult and significant struggle has surrounded the infusion and diffusion of feminist and critical race theory within existing departments and coursework. Aiken *et al.* (1988) offer a detailed example of a group of women faculty who undertook a project to change colleagues' minds about legitimate knowledge and to thereby transform the curriculum. The process involved sustained and collective effort over an extended period of time. And the story is about not just surviving the academy, but inscribing it with new norms, values, and understandings.

Another set of processes by which faculty collectively and politically are changing the academy is through campus commissions. Glazer-Raymo (1999) provides an excellent example of the ways in which groups of faculty seek to effect change on campus, as well as in their classrooms. Her work, and that of the women faculty and administrators she studies, is set within the context of a larger women's movement that speaks to the macro politics of gender. More than simply studying wage gaps in faculty salaries there is much room for scholarship to explore the ways in which groups of faculty push to establish mechanisms and processes to change the patterns, whether through concepts like comparable worth (Blum, 1990) or equity adjustment mechanisms.

There are excellent examples, as well, of research focusing on race based struggles for social justice in the academy. One of the most prominent scholars in this realm is Derrick Bell, among whose books is included "Confronting authority: Reflections of an ardent protestor" (1994), addressing issues of race and gender in law school appointments. Another leading scholar, whose work has influenced many in higher education is bell hooks, who has written, among other things, about "teaching to transgress" (1994), and about a "pedagogy of hope" (2003). In many and profound ways hooks analyzes and challenges and tries to redefine the inscription of race, class, gender, and sexual orientation in peoples' lives, in and out of the workplace.

There are examples of such a political, activist focus on the ways in which faculty can change the academy within younger scholars in

the higher education community as well. We opened this section of our chapter by featuring Ben Baez' work (2000, 2002) on race-related service and critical agency. Worth noting as well is Jones' (2000) work on a group called Brothers of the Academy, young African-American scholars who are working collectively to integrate research, teaching, and service projects to effect reforms in the academy and in the schools that will enhance social justice. They represent an example of Baez' critical agency. Perhaps most prominent in the field of higher education in this regard is Bill Tierney's work, which has both sought to inscribe critical theory in the academy, building "communities of difference" (1993), and to advance and legitimate queer theory (1997), extending the civil rights social movement to sexual orientation, in matters ranging from the curriculum to personnel practices. Each of these represents the significance of studying the conscious political activity of academics. What is thus far relatively lacking is a sense of the other side of the coin, systematic studies of the collective backlash against affirmative action and "political correctness" on campus, and the effects of the rise of evangelical and fundamentalist Christianity on campuses not only among students but also among faculty members.

The examples we have discussed above are of faculty acting as social agents of change organized around significant identities. Yet there is also much work to be done with regard to the collective action of faculty members, and of graduate students, by virtue of their positions as employees. Ironically, although the academic workforce is one of the most highly unionized workforces in the country, and is an arena in which unionization is expanding, there is very little research on this subject (for a recent exception, see DeCew, 2003). If we are to understand the lives of faculty members as knowledge workers, particularly in community colleges and comprehensive public, masters granting universities, where most faculty are unionized, it is necessary for us to begin to study the ways in which the collective negotiations of professors affect not only the conditions of work of faculty members but also the future direction of higher education (see Rhoades, 1998a).

Such work will be particularly important in the new economy, for the growth areas of unionization are in various categories of contingent faculty, and in graduate employees. Some work is emerging in this realm, focusing on the struggles of organizing (Schmid and Herman, 2003), on the strategies and ideologies of the graduate employees (Rhoades and Rhoads, 2003), and on various implications of this organizing activity for higher education organizations (Julius and Gumport, 2002). From our standpoint, adopting a perspective that focuses on how members of

the instructional workforce collectively shape various aspects of the academy, from conditions of work to the configuration and content of the curriculum, opens us up to a range of important questions for exploring and understanding faculty members and their role in the academy.

## CONCLUSION

To conceptualize faculty members as knowledge workers in the new, global economy is to offer a perspective that raises a range of research questions that have not been sufficiently addressed in the literature. Whether the focus is on time allocation, salaries and labor markets, international comparisons, or faculty members as social agents, our framing of faculty members challenges scholars to develop and expand new lines of inquiry. In our view, these emergent areas of scholarship hold much promise not simply in scholarly terms, as domains of research that will generate new theoretical and empirical insights into the academic profession, but also in terms of implications for professional practice in higher education, as issues that speak to the challenges and promise of academe in the twenty-first century.

The time allocation approach that has prevailed in the literature stems from a more industrial era model of managing and indeed controlling the distribution of employees' time among a range of discrete tasks. That is what much of the existing work is about — tracking and monitoring the ways in which faculty members spend their time on teaching versus on research, and seeking to redistribute that allocation. Even from the perspective of managing employees' time to enhance productivity, the dominant approach is insufficient. To fully understand productivity in higher education, one needs to address issues of joint production, and the interaction and synergy among various interrelated activities (Rhoades, 2001).

Yet we are now in a post-industrial economy. That raises a host of questions about faculty members' involvement in various entrepreneurial, outreach, and service activities in the new economy. It challenges us to explore more carefully that part of the workforce that is contingent, a marker of the new economy, considering their activities and allocation of time. It challenges us to think about how work in academe as in other institutions is organized, enacted, and delivered differently in the new economy than in the old. Finally, it challenges us to consider the academic profession as a workforce, and to take the perspective of that



workforce as it changes and organizes itself collectively to address changing conditions of work and purpose in the academy.

Much the same is true of scholarship on salaries and labor markets. Most of the literature focuses on the salaries of individual faculty members, and of aggregated groups of male and female faculty members, examining the extent to which a human capital explanation of salaries holds. By which is generally meant, to what extent are faculty salaries a function of meritocracy, of qualifications and achievements that are a central part of individuals' human capital.

By conceiving of faculty members as working in the new economy, questions arise about the extent to which their new activities (noted above in talking about time allocation) are rewarded in terms of salaries. To what extent are salaries affected by the different sorts of entrepreneurial activities of faculty members? To what extent are faculty members increasingly responsible for generating their own salaries through their grant activities? What is the changing share of entrepreneurially generated income of academic knowledge workers relative to their salaries? In short, the focus on teaching and research productivity as it relates to faculty salaries overlooks a range of new responsibilities and activities of faculty members.

In addition, if we focus on academics as knowledge workers, new questions arise about their organization and segmentation in different labor markets. We are seeing in academe, as in the larger economy, a changing distribution of full-time, secure employment relative to contingent employment. To what extent can individuals move between these categories of employment, and to what extent are they essentially different labor markets? Further, in drawing attention to substantial transformations in the broader economy, we are forced to begin to rethink the divisions along which we compare faculty salaries. Historically, research has concentrated on differences among academic disciplines, and types of institutions. Yet we are witnessing significant changes in the disciplines, a differential stratification among fields based in part on their connection to new economy employment, and the development of new types of academic organizations. Each of these patterns raises questions about salaries. Perhaps most importantly, scholars should consider moving beyond the traditionally classification schemes of academic fields, and of determining empirically whether the old categories continue to be appropriate, and whether new categories, related to features of the new economy, are becoming important in shaping faculty salaries.

Part of the new economy conceptualization is a focus on global dimensions of professions and organizations. Existing comparative work



tends to remain confined by traditional, industrial economy perspectives of faculty as employees whose time allocation should be the principal focus of analysis. Fittingly, the Carnegie Foundation (which had such a profound impact on the development of U.S. higher education beginning in the industrial era) sponsored international survey replicates the basic characteristics of U.S. based studies of professors.

Moreover, cross-national studies remain largely grounded in comparisons of national systems in terms of categories developed by Anglo-American scholars. The assumptions embedded in those conceptual frames about governance, and the interplay of state, market, and higher education do not capture essential features of academic work and organization in many higher education systems. Perhaps even more importantly, the global dimension of academic organization, action, and influence continues to be largely overlooked. Academics need to be understood as knowledge workers, whose activities are profoundly influenced by their position within various global networks of agencies and social agents that affect the configuration and workplaces of faculty members.

Finally, the prevailing conceptualization that drives literature on faculty socialization takes “the organization” and its bounded culture as the point of departure for analyzing the entry and exit of faculty members from the academic profession. In the context of a new economy in which the academic workforce, like many other labor forces is characterized for better or worse by increased flexibility and mobility with regard to individual colleges and universities, such an organizational perspective blinds us to important aspects, processes, and issues of socialization for academics. Patterns of socialization increasingly go beyond “the organization” and beyond one major socialization point, to include resocialization at various points in a career.

More than that, the prevailing organizational and managerial perspective fails to capture the social change role that academics can play. Faculty members are not only subject to colleges and universities, seeking assimilation into the academic profession, they are also potential change agents who in a variety of ways effect reforms in academic organizations by virtue of their political and academic work. Part of the new economy’s effect on academe in terms of contributing to a reconfiguration of academics as knowledge workers in different types of higher education settings and through different sorts of educational delivery systems is to foster the formation of new patterns of collective organization and action within the changing professorate.

In short, then, the perspective we offer suggests that scholars (and

practitioners) consider the implications of the shift to a post-industrial, global economy for our understanding of academic employees as knowledge workers.

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### 3. CONTRASTING PERSPECTIVES ON HIGHER EDUCATION GOVERNANCE IN THE ARAB STATES

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“Know, too, that the sciences seep away, then spring forth for a time, like vegetation or water springs; they shift from people to people, and from country to country.”

‘Abd al-Latif al-Baghdadi (d. 1231), quoted in Makdisi (1981, p. 91).

#### INTRODUCTION

This chapter explores the multifaceted aspects of higher education governance in the Arab states within the broader context of the challenges facing tertiary education in developing countries. The aim is to account for processes of change in governance systems not only in terms of factors associated with market economy and globalization, but also over the backdrop of the socio-political and cultural meanings attached to higher education within different national, regional, and geopolitical contexts.

A cursory review of studies concerned with higher education governance in developing countries raises three major issues of concern to the current chapter. First, studies remain oriented overwhelmingly to management and policy (Saha, 1991, p. 250). As a result, scant research attention is given to the social, cultural, and political underpinnings of various governance reforms. It was further observed that current evaluation models of higher education are inattentive to the contexts within



which higher education systems in developing countries operate (Shaw, 1996). According to this view, Western models limit their discussion to questions of efficiency, accountability, and systemic growth, neglecting the impact of broader power configurations on state-higher education relations (external governance) and on the internal formal and informal decision-making structures within which higher education institutions operate (internal governance).

Second, there is a lack of consensus regarding the factors that affect the emergence and change of academic models over time. Some writers discuss the effects of colonial legacies and policies on the transfer of academic models across national settings, and their role in reproducing the economic and political dependency of developing countries on Western economies (Carnoy, 1974; Mazrui, 1975). Others, however, disagree with such a conclusion, arguing that the “notion of a university as a ‘colonial’ institution, imported from abroad and imposed upon a particular society ... has its uses ... mainly in the field of political rhetoric” (Neave and Van Vught 1994, pp. 265–266). They further maintain that the structure of higher education systems in developing countries is related to the formation of human capital, as part of effective state/nation-building and development planning policies. Still others point out that higher education institutions in developing countries operate as a legitimizing mechanism. They provide the regime with political platforms to assert and maintain authority and power (Hughes, 1994). This explains, according to this view, the overwhelming role played by the state in regulating and controlling higher education institutions (Kamrava and Mora, 1998, pp. 904–908). Yet another view singles out “the disruptions of globalization,” and the emergence of a competitive global economic order as exerting a major effect on the internal restructuring of higher education institutions in developing countries (World Bank, Task Force on Higher Education and Society, 2000).

Third, developing countries are affected by geopolitical and regional struggles, whether military or political. These may have devastating effects on their higher education systems or on the type of governance reforms introduced. While the effects of these processes on “brain drain” are explored more frequently (Mahroum, 2000), research into their effects on the organization of academe remain rather more modest. For instance, Altbach (1995) discusses the effects US foreign policies on the development of Latin American higher education. He points out that in order to facilitate “American policy goals, particular models of higher education have been exported and specific kinds of programs supported.” Models included the founding of technical universities “which functioned



in direct competition with the established ‘national universities’” (p. 455). Reviewing the case of Cambodia, Duggan (1997) pointed out that the prolonged civil war of the 1970s, and the subsequent Vietnamese occupation, led to the nearly complete dismantling of the higher education system under the Khmer Rouge regime. Following the war, broader geopolitical struggles significantly affected the types of governance structures adopted as part of the reconstruction of the Cambodian higher education system, whether these were influenced by the Soviet model or, since the early 1990s, by the policies and politics of various donor countries.

The concerns briefly discussed above are pertinent to the case of higher education in the Arab states. First, since the groundbreaking monographs of Waardenburg (1966) and Qubain (1966), which documented the emergence of public higher education systems, the case of higher education governance in the Arab states has been largely neglected in the broader literature. The bulk of the research — commissioned either by international agencies such as the World Bank and United Nations agencies or by regional bodies and research centers — tends to be policy-driven and based on human capital, managerial, and normative approaches. Second, studies concerned with higher education governance focus primarily on the national level (Alghafis, 1992; Bader, 1994) or are based on institutional case studies (Al-Ebraheem and Stevens, 1980; Bahurmoz, 2003; Chenoufi, 1975). As a result, the broader geopolitical dynamics associated either with Western dominance and hegemony or with inter-Arab conflicts and competition have been largely neglected, with few exceptions (Reid, 1990), and their effects on higher education reforms remain unaccounted for. This state of affairs, it is argued, has largely disconnected our understanding of higher education governance from the broader cultural, social, political, and economic contexts within which higher education systems operate.

In this chapter, the case of the Arab states (across the Arabian Peninsula, the Middle East, and North Africa) serves as a springboard to illustrate the complexity and multifaceted aspects associated with higher education governance within a particular developing region of the world. To address the above concerns, the chapter proceeds through four interlocking parts. The first part addresses the rise and expansion of public higher education systems across the Arab states from the mid-twentieth century onward. It is argued that, as Arab states achieved independence, ruling elites proceeded to monopolize higher education provision at the expense of marginalizing community-based modes of governance. The section shows how, in the process, governance reforms

re-negotiated not only state-higher education relations (external governance) but also the internal governance of community-based institutions of higher learning which pre-date the formation of the contemporary Arab nation-state.

The second part discusses the multifaceted tensions and contradictions underpinning the public higher education systems operating in various Arab states. The aim is to show how issues of language, bureaucracy, state policies, and class and gender relations pervade higher education institutions, ultimately determining their institutional autonomy and the prevalent modes of governance, external and internal, formal and informal.

The third part positions academic reforms undertaken in some Arab states within the broader context of regional geopolitics. The aim is to illustrate how academic models “transit” across the Arab region and how they are affected by political and military struggles concerned with regional hegemony. These processes, it is suggested, shape the ways universities are organized, managed, and, eventually, reformed.

The fourth and last part addresses the fiscal crisis of the Arab state from the mid-1980s onward, examining its effects on the restructuring of higher education and the emergence of new modes of governance. The particular cases of Egypt and Jordan are explored in more depth, given the gravity of their fiscal crises and the extensive restructuring and privatization policies put in motion. The discussion of these two cases reflects how governments engaged in higher education restructuring maneuver differently between antagonistic demands set forth by both international lending agencies and local constituencies on which the state depends for political legitimacy and support.

Finally, within the frame of a concluding discussion, an attempt is made to articulate the implications of these processes for a sounder understanding of higher education governance in the Arab states.

## PART ONE

### THE RISE OF MASS PUBLIC HIGHER EDUCATION SYSTEMS

The seeds of the first contemporary institutions of higher education operating in the Arab states were sown beginning in the early nineteenth century. These were established either as missionary European and American colleges and universities or as colonial institutions. Others,

particularly in Egypt, were introduced as schools of higher learning patterned after the French *Grandes Écoles*. However, institutions of higher learning remained limited in numbers, and access was limited mostly to established socio-economic groups in the major urban areas. The few higher education institutions available served principally the bureaucratic needs of the established regime or the colonizer (Szyliowicz, 1973). It was not until the second half of the twentieth century, following the retreat of European colonial powers from the Middle East and Africa after World War II, that mass higher education systems started to expand vigorously, largely under the auspices of the newly independent Arab states.

In the early 1940s, ten universities operated across the Middle East and North Africa. These included: (1) the American University of Beirut, originally known as the Syrian Protestant College. Founded in 1866, it was reorganized in its present status in 1920; (2) the Jesuit-run *Université Saint Joseph*, established in Beirut in 1874/5; (3) the Egyptian University, founded as a private body in 1908. Nationalized and reorganized in 1925, it was renamed *University Fouad I* by the British-controlled monarchy in 1936, to be renamed, again, as *Cairo University* in 1953, following the anti-monarchic coup of 1952; (4) the University of Algeria, created under French colonial rule in 1909 out of existing colleges, some of which dated back to 1859; (5) the American University in Cairo, founded in 1919; (6) the Syrian University, now University of Damascus, officially founded in 1923 out of existing colleges, thus becoming, in fact, the first public Arab university; (7) the University of Alexandria founded in 1942; and the millennial mosques of (8) *Al-Zaytouna* (Tunis, Tunisia), (9) *Al-Qarawiyyīn* (Fès, Morocco), and (10) *Al-Azhar* (Cairo, Egypt), founded in the ninth and tenth century. Thus, pre-World War II universities in the Arab world were largely private and foreign institutions. The system was, moreover, dichotomized between the veteran Islamic institutions and institutions modelled along the continental and American models (Akrawi, 1979; Qubain, 1966; Waardenburg, 1966).

Beginning in the mid-twentieth century, the rise of the contemporary Arab states altered the higher education landscape beyond recognition. As part of nation-building policies, the number of universities rose to 47 in 1975 (Akrawi, 1979, pp. 43–44) and to 72 by 1986 (Massialas, 1991, pp. 979–981). In the mid-1990s, Qasem (1996, p. 120) reported 132 universities (half founded in the period 1980–1993), 136 university-level colleges or institutes, and 437 community colleges or diploma-granting technical institutes. By 2003, the *Arab Human Development*

*Report* counted 184 universities (United Nations Development Program [UNDP], 2003, p. 73). In 2004, the Association of Arab Universities (AARU) alone regrouped 149 universities — 109 public and 40 private — operating according to a variety of academic models and subject to different modes of governance.

With respect to enrollments in tertiary education institutions, between the 1930s and 2003, UNESCO and UN statistics suggest that the number of registered students in any higher education course increased, roughly, from about 30,000 to about 5,000,000 (out of a current population estimated at 240,000,000). More specifically, during the last third of the twentieth century, the gross enrollment rate of the 18–23 year-old age group in all Arab states combined rose from 3 percent in 1965 to about 20 percent in the late 1990s, though significant disparities persist among Arab states. Other statistics show that significant disparities persist between Arab states in terms of the Gross Enrolment Ratio (GER) of the 18–23 year-old age group studying in tertiary education.<sup>1</sup> Sudan, Oman and Yemen have less than 10 percent each. In the UAE, Iraq, Morocco, Algeria, Syria, Saudi Arabia and Tunisia, the percentage lies between 10 and 23 percent, while in Qatar, Bahrain, Palestine, Jordan, Lebanon, Egypt, Kuwait and Libya, it ranges between 25 and 50 percent. According to Zahlan (1999, p. 269), by the late 1990s, about 8 percent of the economically active population in all Arab states combined has completed four or more years of higher education.

The rise and expansion of mass public higher education systems was not without its problems, costs and inherent contradictions (Haddad, 1992). It occurred primarily in Arab societies characterized by low literacy rates — societies in which the state remained the major employer of graduates, and where graduation often meant joining the state bureaucracy. Yet, more than anything, the expansion of state-controlled public higher education systems appropriated community-based modes of higher education provision. It also meant the imposition of a paradigmatic alternative, namely, a uniform and state-financed system. Such a transformation is not merely structural. Rather, it reflected a radical, and conflict-laden, transformation of the existing

<sup>1</sup>The GER is defined by UNESCO as the total enrolment of tertiary education, regardless of age, expressed as a percentage of the age group eligible to study in tertiary education (normally the 18–23 year-old age group). Statistics reported here refer to the latest year available (1999–2002).

social bases of power, the determination of new sources of political authority, and the definition of what valid knowledge is (Eickelman, 1985, 1992; Mazawi, 2002).

First, the state's exclusive control over public education, and its power to define what its public attributes are, constitute a radical departure from a primarily voluntary and benevolent activity in the field of higher education. In other words, community-based and associative modes of higher education governance — evolving around the *madrassa* (College of Law), a privately-founded charitable endowment (*waqf*) (Makdisi, 1981, p. 300) — were henceforward supplemented by the “canonized” role of the state as a provider of *mass* education. Second, and as a correlate of the first point, the hegemony of the state signaled a radical shift in the economic foundations of educational organization, from privately-owned to state-owned capital. Third, Islamic education has been compartmentalized, and, to adopt a term used elsewhere by Starrett (1998, pp. 9–10), “functionalized.” In other words, Islamic education was made subservient to the “strategic and utilitarian ends” of the state (Starrett, 1998, p. 10). As Carré (1979) and Yahya (1986) have shown for Egypt, Iraq, Syria, and Yemen, Islamic education has been used to vindicate a secular regime ideology. Quite differently, in the case of Saudi Arabia, and since the early 1990s in Sudan, the institution of Islamic universities remains closely aligned with the state's ideological and political agenda. In Yemen, up to the unification of North and South Yemen in 1990, the “religious institutes” served as a policy tool in the hands of the North Yemen government to mitigate the effects of Communist ideology prevalent in South Yemen. Since unification, however, the role of these institutes and other Islamic higher education institutions is being discouraged by the central government, being perceived as offering an institutional platform to a Muslim Brotherhood-dominated opposition (see Al-Qadhi, 2001).

Following independence, many Arab governments initiated legislative and institutional reforms aiming to “modernize” (*tahdīth*) — just as much as “nationalize” — schools and higher education institutions, the two terms being perceived by policy makers as largely synonymous. Post-independence reforms also targeted endowed institutions of higher learning, at times not without the latter's strong protest, resistance and resilience (Aroian, 1983; Barraclough, 1998; Najjar, 1976). This was the case of, among others, *Al-Zaytouna*, *Al-Azhar*, and *Al-Qarawiyyīn* — millenary higher learning institutions attached to reputed mosques (see e.g., Sraieb, 1984). Some of these endowed institutions were incorporated into the publicly funded and supervised higher education system.

For instance, Law No. 103 of 1961 redefined the relations between Al-Azhar and the Egyptian state. Faculties of medicine, engineering, agriculture, and science, as well as an Islamic Girls Faculty, were cloned into its existing structure (Hyde, 1978, pp. 154–155; Szyliowicz, 1973, pp. 281–283). Teaching in some of these faculties was undertaken in English (medicine and engineering). Moreover, as Reid (1990) observes, “[p]rofessors in scientific and technical subjects were brought in from the state universities and had little to do with the campus near the mosque” (p. 210). Most importantly, “the office of the Shaykh al-Azhar and rector of Azhar University were separated, and the appointment of outsiders to al-Azhar’s Supreme Council brought it under tighter control and diluted the Shaykh’s power” (p. 210).

Commenting on these reforms, Szyliowicz (1973) argued that “[o]f all the changes that have taken place in [the Egyptian] higher education since 1952 few have been as successful as the reform that transformed Al-Azhar into what is essentially the counterpart of a Catholic University in the United States” (p. 281). Others profoundly disagree, however. Bilgrami and Ashraf (1985) observe that the reform of *Al-Azhar* institutionalized a “duality” between Islamic and non-Islamic fields of knowledge within the same institution, “failing to harmonize the two systems and the two different approaches to knowledge” (p. 33). Reid (1990) noted that, as a result of the 1961 reforms, the “religious faculties, the heart and soul of al-Azhar for a millenium, joined the humanities at the bottom” of the prestige hierarchy, reflecting in this a similar trend that occurred in the state universities as well (p. 210).

In other Arab states, endowed institutions were incorporated into existing public universities, as was the case with *Al-Zaytouna*, with the status of faculties of Islamic studies and *Shari’a* (Islamic law). In Baghdad (Iraq) and Damascus (Syria), colleges of Islamic jurisprudence were also integrated into existing universities (see Akrawi, 1979; Waardenburg, 1966). Efforts were also deployed to revise and standardize their credentialing traditions and their curricular structure along the lines of the largely Westernized public universities. Over the decades, the Arabic daily press has recorded an impressive set of contentious issues raised by activists, concerned students, and professors affiliated with these institutions (see Al-Zaydi, 1984; Dayf Allah, 1991). These evolve around the contribution of reformed institutions, the opportunities associated with their reformed credentials, and their status compared to that of the secular state universities.

One outcome of these reform policies has been the setting of Islamic higher education as a distinctly identifiable option of higher learning.

This distinction between Islamic and other (Westernized) universities or faculties acquired a “hierarchical” connotation: Islamic tracks of study operate, in many cases, as default venues for students not admitted into the more competitive specializations. Admissions systems based on the average grade attained while earning the secondary school graduation diploma (*tawjīhi*) further reinforce this distinction. Students with the highest averages are admitted to the more lucrative and socially mobile scientific faculties; those holding the lower and lowest averages are streamed into the saturated social sciences, and humanities and Islamic studies respectively (see Reid, 1990, p. 210). Admissions policies continue to fuel considerable dissatisfaction and resentment among the professoriate teaching in Islamic fields of studies, and have instigated calls for reforms (see e.g., the papers edited by Malkawi and Abu-Sal, 1995).

Nasser al-Din al-Assad, a former Jordanian university president, more generally lamented the consequences of this process, and particularly the compartmentalization of Islamic studies within distinct universities or faculties. In his view, the emergence of Islamic universities, in “virtually every Arab and Muslim country,” is a recent hybrid colonial outcome of East-West relations, and is alien to established Muslim scholarly traditions (Al-Assad, 1996, pp. 15, 26–30). Such institutional differentiation, he argues, has effectively encapsulated and ultimately isolated Islamic epistemology and worldview within university campuses, faculties, or departments exclusively devoted to Islamic studies and *Shari’a*, or alternatively devoted to the study of an imported Western-produced science. This institutional differentiation, he further claims, has effectively de-Islamized disciplinary fields of knowledge, alienating them *vis-à-vis* their original cultural context. It further prevented Islamic epistemology and worldview from having any bearing on the development of an indigenous science and scientific research, rooted in their time, place, and history. The import of Western academic models, he concludes, further exacerbates the outcomes of this process and increases the dependence of Muslim societies on Western science and technology (p. 30).

## PART TWO

### HIGHER EDUCATION GOVERNANCE AS A CONTESTED TERRAIN

Higher education institutions in the Arab states inhabit a precarious and contested terrain. The organization of the academic field, institutional autonomy, and the broader relations linking state and higher education are shaped by contending centers of power, situated within either the state or the society at large.

*Language as Symbolic Power:*

*“Cela ne marchera pas, mais il faut le faire . . .”<sup>2</sup>*

The Arabic language is perhaps one of the most debated aspects of higher education in the Arab states. Its use — as a language of instruction, as a medium of scholarly communication, and as a symbolic signifier that undergirds the “Arabness” of the higher education enterprise — remains highly unsecured in some systems.

Arabic is used exclusively in the teaching of Islam and Arabic, naturally. It is used, with a few exceptions, in the humanities and the social sciences as well. In contrast, the exact sciences, technology, and medicine are taught either entirely or substantially in English or French, depending on the institutional context and/or the colonial history of the country (see Gallagher, 1985, 1989). Hence, how Arabic is used within universities, and to what extent, has far-reaching implications not only for the organization of the academic workplace, but also for the emergence of a shared academic and civic culture (Al-Ansāri, 1988; Abu-Ishsha, 2000, pp. 68–84). This is particularly the case with respect to the *Maghreb* states (Algeria, Morocco and Tunisia).

In *Maghrebi* universities, as in the broader society, language is a constant reminder of the epistemological and political ruptures underpinning the university project (Sebaa, 1996). Further, language is powerfully associated with the social and institutional dislocations operated by colonial legacies, whether French or British. French colonial policies in Algeria (1830–1962) are a case in point. As early as 1904, “the teaching of Arabic literature and Arab history were not allowed in schools

<sup>2</sup>“It will not work, but it must be done . . .”. Comment made by Taleb Ibrahim, entrusted with the implementation of the Arabization of the Algerian educational system (Abu-Haidar, 2000, p. 156).



and colleges” (Abu-Haidar, 2000, p. 152). Moreover, “from 1938 to 1961 Arabic was classified by law as a foreign language” (Dobie, 2003, p. 33). Benrabah (1999) qualifies these dislocations as a “linguistic traumatism,” with far reaching implications for social cohesion and institution-building. The persisting effects of these dislocations is still prevalent, for instance, in Algerian universities where, according to Zhiri (1992), “[m]any teachers have great difficulty teaching in Arabic because they were educated in French” (p. 33).

Following their independence, Arabization policies in the *Maghreb* states targeted the French-Arabic divide and its devastating socio-political colonial residues. In Algeria, where Arabization remains particularly debated, these policies failed to present a viable political alternative, despite a long series of laws and reforms introduced since the early 1960s. For instance, one of the more recent pieces of legislation, dating from 1991, prescribes in one of its articles that Arabization in the universities has to be completed by 5 July 1997 (Abu-Haidar, 2000, p. 158). As Edwards (2002, p. 99) observes, the “relationship of language to national identity remains a fraught one in Algeria”. Within this context, universities stand at the forefront of the mediation of political dissent, the formulation of competing national, ethnic and religious identities, and the emergence of contesting centers of power (Cheriet, 1996).

Less discussed is the fact that Arabization policies also led to the “marginalization and even to the suppression of regional languages” (Dobie, 2003, p. 34), such as the varieties of the *Tamazight* language spoken by *Imazighen* (singular: *Amazigh*) indigenous non-Arab communities, commonly known as Berber (Abu-Haidar, 2000, p. 151). Berber communities represent approximately a quarter of Algeria’s population and over half of Morocco’s.

Arabization policies affected the status of indigenous cultures within universities in many ways. For instance, it was observed that as part of Arabization policies, Mouloud Mammeri (1917–1989), “Algeria’s most celebrated Berber scholar and writer” (Dobie, 2003, p. 34) and Professor of Berber at the University of Algiers, “was dismissed from his post and the Chair of Berber Studies abolished” in October 1973 (Abu-Haidar, 2000, p. 158); the publication of journals focusing on Berber studies was discouraged (Dobie, 2003, p. 34); and academic symposia on *Tamazight* poetry “not allowed to take place” (Abu-Haidar, 2000, p. 158). Other conflicts emerged within the professoriate, as within the student body, over the aims of Arabization and the phasing out of French (Cheriet, 1996). Also, the more recent emphasis placed on the use English as a foreign language in universities, “hints at the pressures of

globalization to the struggling Algerian economy” (Edwards, 2002, p. 99).

Algeria and Morocco had to await major outbreaks of activist Berber protest to see Arabization policies somewhat tempered, and some recognition granted to indigenous culture and language within academe from the late 1990s onward. In Morocco, a Royal Institute of *Amazigh* Culture was established in 2001, and the teaching of Berber history and language facilitated with the adoption of a new 2003 policy. In Algeria, departments of *Amazigh* language and culture have been operating for several years in the universities of Béjaïa (Targa Ouzemmour) and Tizi-Ouzou (Ihesnawen) located in the Kabylie region (northern Algeria, East of the capital Algiers). Of late, on October 4, 2001, Algeria’s Prime Minister “announced that the government would recognize Tamazight as an official national language” alongside Arabic (Edwards, 2002, p. 99). The impact of these policies on the internal organization of *Maghrebi* universities remains to be seen. While they signal attempts to reconcile shifting and competing national, ethnic and cultural identities — i.e. “of the merely local” — the extent to which these policies would ultimately transform the university into a multicultural and multilingual organizational space is still difficult to predict.

In several other Arab states, and not only in the *Maghreb*, language policies remain part of the homogenizing practices of the nation-state. It should be observed that universities are perceived by policy makers as central instruments of social planning. For instance in Sudan, Arabization policies of higher education sparked considerable controversies and confrontations, both within the universities and with social groups and movements (Taha, 1990). Opposition groups argued that Arabization — perceived as being synonymous with Islamization — exacerbates the socio-cultural and political marginalization of southern Sudanese non-Muslims and of non-Arabic speakers (Lesch, 1998). Arabization also negatively affects transition opportunities of various ethnic and linguistic groups into higher education. In Sudan, as elsewhere, Arabization of higher education curricula is still a highly sensitive political issue. It has widespread repercussions as to student and faculty access, retention and mobility opportunities within higher education, and for social development as a whole (see e.g., the discussion by Muhsin, 1996).

Issues pertaining to the status of Arabic as a language of instruction are also part of a much broader problem associated with the dependency of developing countries on knowledge produced in Western countries (see Altbach, 1995). This dependency leaves universities in the Arab

states in a subordinate and predominantly consumerist position with respect to knowledge. Arab universities are, without exception, peripheral to the established networks of knowledge production. They process, rather than generate, knowledge produced mostly in Western countries. This knowledge remains largely foreign to local institutional practices and economic realities given the limited links between universities and the industry (Zahlān, 1999; Zahlan, 1999, pp. 267–269).

The debate over Arabic has implications, among other, for the organization of academic departments and faculties, particularly those concerned with literature, linguistics and the study of dialects. The emphasis placed on literary (standard) Arabic — used as a medium of scholarly communication and as object of research, distinct from its colloquial variants — in many cases inhibits research into the vernaculars spoken by Arab societies residing in various geographic locations (Abu-Haidar, 2000, p. 162). Some states, such as Syria, embarked on a comprehensive policy of Arabization in all disciplinary fields, part of a broader “decolonization” of knowledge (Badinjki, 1994). Yet, according to Hanafi (1999), these policies “paradoxically reinforce Syria’s dependence on the former colonial countries in terms of the engineering sciences and technological know-how” (pp. 20–21), due chiefly to the scarcity and low quality of translated books and the theoretical and practical aspects associated with instruction.

#### *The Bureaucratic and Political Subjugation of Academic Labor*

It is estimated that across the Arabian Peninsula, the Middle East, and North Africa well over 100,000 faculty members were employed in universities in the mid-1990s (Zahlan, 1999, p. 270). With the exception of Palestinian faculty members and the professoriate employed in private institutions, their employment conditions are shaped primarily by the statutory framework regulating the public service. For all practical purposes, their contractual status is similar to that of other civil service employees. For instance, in Saudi Arabia, the Council for Higher Education, an agency affiliated with the Ministry of Higher Education, set the remuneration scale of faculty members in a fashion comparable to that of their counterparts employed in the public service: instructor, 8th rank; lecturer, 9th rank; assistant professor, 12th rank; associate professor, 13th rank; and professor, 14th rank (Kingdom of Saudi Arabia, 1996). A university director (*mudīr*) holds a rank equivalent to that of a state minister. Variants of these institutional frameworks are also in effect in several other Arab states, such as Egypt, Algeria, and Tunisia.

Casting the academic profession as part of the civil service code generally follows the rationale of the continental (European) academic model in which the state assumes a strong role in defining the legal and administrative structures regulating higher education. The continental model — and more precisely its Humboltian variant — acknowledges, however, the collegial aspect of the academic profession, leaving considerable autonomous space for internal self-regulation by the professoriate (Maassen, 1997). In contrast, the regulatory role of the Arab state encompasses both external and internal governance, totalizing the state's jurisdiction over administrative and academic matters (Cambar, 2001, pp. 174–214). In the process, internal shared governance in decision-making is restricted. Academic promotions of faculty are normally based on years of service, much less on publications and research. Moreover, no buffers operate between the state and higher education institutions, further blurring the lines between the academic and executive functions within higher education institutions. In some cases, such as in the Arabian Peninsula, ministers or heads of state act as the honorary or effective presiding officers of higher education institutions. In Egypt, the appointment of university presidents and faculty deans and the election of student unions are tightly regulated, and increasingly so during the 1990s, curtailing students' and professors' participation in university affairs (Farag, 1990, 1994; Kienle, 2001, p. 50). A former president of Menoufia University, in Egypt, observes:

At the institutional level, both the degree of academic freedom and institutional autonomy is subject to close oversight and supervision exercised through government policy and through control by central national bureaucracy. University governance comes under close scrutiny and control of the cabinet Minister with responsibility for Higher Education. In addition to his power to nominate both university Presidents and Vice-Presidents, the Minister also chairs the Supreme Council of Universities. Such broad-ranging authority generates some constraints, amongst which a certain fear of possible dismissal. The degree of administrative latitude available in the sphere of university governance tends to be limited. (Abdel-Motaal, 2002, p. 370)

Similarly, in Saudi Arabia, Mohammad A. Alkhazim, a university professor at the College of Applied Medical Sciences, King Faisal University, writes:

Centralized control of higher education has been a dominant characteristic in the Saudi Arabia administrative structure. In fact, the higher

education system in Saudi Arabia has shifted during the last two decades from a liberal system towards centralized control. Thus, three decades ago, heads of departments and deans of colleges were selected by election. Now, they are appointed by the Minister of Higher Education or the university president. Previously, Saudi universities used to follow different academic systems, such as the credit hour system (American) and the yearly courses system (British), until 1992, when the Prime Minister, the chairman of [the Council of Higher Education], issued a royal decree that all higher education must follow the year/courses system. Most of these rules began with the theme of regulation or supervision and eventually interfered with the day-to-day management of the university. The practice contradicts the often claimed policy of independence and freedom of higher education in Saudi Arabia. Competition and independence among higher education institutions are essential for development. (Alkhazim, 2003, p. 485)

In Qatar, one of the former directors of its national university observed that “the administrative and financial decisions of the university are not implemented unless approved by the Ministry of Finance and the Civil Service Bureau” (quoted in Cambar, 2001, p. 180). Abu-‘Ishsha (2000, pp. 25–54, 65–67) reports that in Algeria, state administrators adjudicate administrative, and in some cases even academic, matters such as professorial appointments, politically-motivated mass promotions, or dismissals. His is a candid testimony of university governance trapped between the political contestation and fragmentation of the state and the precariousness of ethics and standards within academe. Other professors — notably from Egypt (Abu-Zayd, 2000; Saleh, 2000), Jordan (Al-Karyuti, 1996), and Saudi Arabia (Alkhazim, 2003), to name but a few — have occasionally published personal accounts of their experiences in academe. These bear witness to the anxieties and deep resentment prevailing among a professoriate aware of the need to safeguard university autonomy, yet caught between relentless state machineries and the difficulty of articulating a socially and politically viable discourse. Cambar (2001) observes in this regard:

Arab universities[,] and particularly those which witnessed political unrest among their students, are governed by police force internally and externally. Police centers are found inside [their campuses] as in Tunis and Yemen, or a university guard as in Egypt, charged with controlling, monitoring and warning, so that if circumstances required it trained police forces would attack from the outside to repress any student movement which extends beyond the walls of the university campus. (p. 192)

Within this context, internal regime considerations often prompt reform in academic calendars, as a tool to curb dissent and rising student politicization. For instance, Farag (1994, p. 258–259) reports that in Egypt, systematic evaluations of university students were sometimes politically imposed by the state, in order to leave less available student time for “non-academic” activities, a euphemism for political activism. In Syria, at the University of Damascus, where the semesterial calendar was adopted, faculty members complained that “the semesterial regime [...] does not leave sufficient time for natural and healthy interaction between faculty and students to take place,” especially in conditions of over-burdened classrooms and highly stressful teaching loads (Watfa, 1996, p. 83).

Lebanese and Palestinian higher education institutions depart, in some respects, from the above prevalent mode of governance. In Lebanon, the majority of higher education institutions are operated by religious and other private bodies, whether community-based or corporate. Since the enactment of the Higher Education Act of 1961, including subsequent legislation and amendments, the state’s role is concerned with accreditation and licensing, through the Directorate for Higher Education located within the Ministry of Education and Higher Education (El-‘Await, 1997). Institutions differ significantly in terms of curricula, the language of instruction, internal governance structure, and the regulations pertaining to the adjudication of academic and administrative affairs. Variants of the continental and American models operate in tandem, depending upon the institution concerned, its historical legacy, and its organizational affiliation (El Amine, 1997). No formal efforts are deployed to standardize these disparate institutional settings. However, as Bashshur (1997) notes, efforts have been undertaken to expand accessibility to the Lebanese University, the only public university in the country, which enrolls about half the Lebanese student population via nationally scattered outreach campuses.

Quite differently, Palestinian higher education in the West Bank and the Gaza Strip operated, until the mid-1990s, largely outside the bounds of a formal political bureaucracy. Established since the early 1970s by distinct Palestinian constituencies, higher education institutions formed part of the resistance against Israeli military occupation, and attempts to develop locally relevant educational and occupational opportunities (Taraki, 1999). Generally following the American model, these Palestinian institutions expanded despite restrictive and punitive measures imposed by the Israeli military (Johnson and Naughton, 1995).

Already in the late 1970s, Palestinian institutions of higher education also generated their own external governance structure, a coordinating agency known as the Council for Higher Education. Abu-Lughod (2000) observes that the Council

provided educational leadership, coordinated the development of new programs within universities, tried to set common standards and criteria for recognition, helped in raising funds for the system of higher education, and distributed financial support that came from international agencies and the Palestine Liberation Organization (PLO). Over time, it assumed considerable moral authority, monitored educational growth, and influenced the development of higher education. (p. 92)

Abu-Lughod further notes that the “council functioned in this capacity until it was formally incorporated into the newly established Ministry of Higher Education, the educational arm of the Palestin[ian] Authority, formed in the wake of the Oslo Agreement” in 1994. In 2003, the Ministry of Higher Education was merged with the Ministry of Education, thus placing all institutions under the Ministry of Education and Higher Education. It is also worth noting in this regard that the Palestinian 1999 Law of Higher Education defined the structures governing higher education institutions, emphasizing the role of the Palestinian Authority (PA) as an accrediting and licensing body. Moughrabi (2004, p. 10) points out that a

semiofficial commission for the accreditation and licensing of new programs and institutions . . . reviews existing criteria, develops new criteria for accreditation, and produces procedures for an ongoing assessment of all programs that grant academic degrees. All this is based on a two-tier methodology of self-evaluation and external review. (p. 10)

Whether these shifts signal greater control over higher education exerted by an emerging Palestinian state remains to be seen. Moreover, it is less clear at this stage how these changes would affect the internal governance and autonomy of Palestinian universities over the long run.

Be as it may, Palestinian higher education institutions have been affected by the collapse of the political negotiations between Israel and the Palestinian Authority since 2000. Israeli military operations exact heavy human and infrastructural losses, hindering the proper carrying out of research, teaching, and examination. The blockade imposed on the West Bank and the Gaza Strip prevents students, faculty and officials of the Ministry of Higher Education from moving freely between and



within regions to attend universities. Fading hopes for a negotiated political solution see system planning, coordination, admissions, and staffing stall. Within this context, classes are often held off-campus due to roadblocks, military incursions, arrests, and the sealing of campuses by Israeli military forces (Moughrabi, 2004). As a result, Zureik (2002) points out that “tuition fees account for 68 per cent and 86 per cent of university current costs and share of total revenue, respectively, and are high by international standards.”

#### *Development Policies and Institutional Autonomy*

Higher education institutions in the Arab states are widely viewed as instruments of social and economic development (Kazem, 1992). The subordination of higher education to externally-defined development plans comprehensively affects the development of meaningful internal governance structures, particularly with respect to admissions (Al-Saadi, 1997, p. 198). Admissions requirements, the appointment of faculty, and budgetary allocations are all undertaken and determined by centralized state agencies located outside of the universities. These administrative demands are constantly “exhausting faculty members in daily and routine paper work disconnected from direct academic and research interests” (Abdallah, 1994, p. 219).

While development policies in most Arab states aim to provide free access to higher education — thus enabling greater entry to members of previously excluded social groups — these policies have largely transformed universities into teaching institutions. Resources earmarked for research and the development of modularized graduate and post-graduate research programs are insufficient. Moreover, guaranteed employment policies strain higher education considerably, exacerbating, according to Zhiri (1990, pp. 22–26) the misalignment between university training deliverables and labor market needs. Since the 1980s, several Arab governments have attempted to limit, if not revoke guaranteed employment policies.

As a result of the cumulative effects of these policies, the authors of the *Arab Human Development Report* (UNDP, 2003) recently concluded that universities in the Arab states generally “lack a clear vision [. . . and . . .] well-designed policies regulating the educational process” (p. 56). They further pointed out that overcrowding, decline in expenditures, and inadequate facilities hamper the quality of instruction and research. Interestingly, three decades earlier, Szyliowicz, in a major socio-historical study of education in the Middle East, concluded:



Nor has any [Arab] country, with perhaps one or two exceptions, yet paid sufficient attention to the establishment of a coherent system of priorities for the educational enterprise, though without such priorities it is unlikely that the many dysfunctional aspects can ever be reduced, particularly the wastage, in the content and method of teaching and in inadequate administrative practices. . . .

The result, as we have stressed, is that higher education throughout the region remains characterized by significant deficiencies and does not contribute to the achievement of national development goals. (Szyliowicz, 1973, pp. 323–324)

#### *Patriarchy and “State Feminism”*

The structures governing higher education in the Arab states remain, by and large, masculine social and political spaces, firmly entrenched within a patriarchal and patrimonial social order (Sabour, 1996, p. 82). While universities and the majority of higher education institutions in the *Machreq* and *Maghreb* states are generally co-educational (with some notable exceptions), their Arabian Peninsular counterparts are, with a few exceptions, gender-specific.

Access to senior positions within the higher education system (Sabour, 2001, pp. 61–70) or mobility from academic to ministerial careers (Reid, 1990, p. 220) remains highly disadvantageous to women. As is the case worldwide (Bain and Cummings, 2000), and in the Arab states as well, women are more likely to be engaged in teaching than in research. As a result, their career opportunities remain subordinate to those of men (Kudat and Abadzi, 1990, pp. 36–43).

In a study of Arab academics undertaken in several Arab states, Sabour (2001) found that the majority of faculty women in his sample came from middle and upper-class backgrounds. Still, their integration as equal members of an academic community continued to be contingent upon an array of male-imposed practices. In another survey, undertaken in seventeen public universities operating in nine Arab states, Hammoud (1993) found that “Arab women’s participation in higher education management has been minimal; they were found primarily in intermediate management level positions, while being non-existent at top posts. So their participation in the decision-making process is still low” (p. 37). According to UNESCO statistics, significant differences exist between Arab states in terms of the proportion of women employed as faculty members. Women account for around a third of the tertiary education professoriate in Lebanon, Saudi Arabia and Tunisia; between one fifth and one quarter in Morocco, Egypt and some of the smaller

Gulf states; and roughly between ten and fifteen percent in the remaining Arab states. These differences bear witness to the institutional, social, and political factors impacting the status of women within different geographic and national settings.

Higher education institutions are replete with arrangements which marginalize or confine women whether socially or academically. In Saudi Arabia, in which gender-specific institutions or facilities are the law and the norm, women “are not able to access technical and vocational education and training” (Mahdi and Barrientos, 2003, p. 72). El-Sanabary (1992), who worked in a Saudi Arabian women’s faculty, observed that within universities, “women faculty are professionally isolated, and female administrators are overburdened with teaching and administrative responsibilities while most lack pre- and in-service management training” (p. 13).

Some have observed that within the socio-cultural context of Gulf societies gender segregation, beyond its embedded discrimination, sometimes provides women with sheltered educational and occupational opportunities (Fakhro, 1997). According to this view, these arrangements lessen or totally avoid competition with men and enable women to carve out their own professional and occupational spaces in gender-based occupations (e.g., medicine and education). Such a gendered division of opportunities has been termed by Moghadam (1993) as representing a “patriarchal gender contract.”

Others have further pointed out that, with some exceptions (see e.g., Lesch, 1998, pp. 133–134), Arab state policies seek to promote women’s access to higher education. This is undertaken as part of what Hatem (1995) calls “Arab state feminism,” which endorses women’s participation in state building and human capital formation, particularly in post-independence periods. This has been the case in the majority of the Arab states — most notably in Tunisia and Saudi Arabia — despite significant differences between their regimes’ ideologies. In the latter case, Doumato (2003), indicated that “the ruling elite at every step have taken the lead in opening educational avenues for women” (p. 243), despite being tied to a particularly conservative clerical class. Yet, women’s institutional opportunities are carved in a fashion which does not jeopardize the status and position of men.

Despite their continued low participation in the labor market, the (Arab) state is the major employer of women. By expanding women’s opportunities, entrenched elites aim to redraw the distribution of social and political power and enhance regime legitimacy. This is particularly when regime contestation increases and political stakes are particularly

high. For instance, it was not until 1994, well after the restoration of Kuwait from Iraqi occupation, that the first woman to serve as president of a coeducational university in a given Arab state was appointed by Kuwait's head of state (Bollag, 1994). However, this appointment only emphasized the subordinate position of women within Kuwaiti society given the fact that women cannot vote or stand for election. Moreover, by the end of the 1990s, as women's institutional and occupational visibility increased both within and outside academe, legislation introduced by the Kuwaiti parliamentary opposition effectively halted this process. It imposed gender segregation within Kuwait's higher education system (Del Castillo, 2003; Tétreault, 2000, p. 29), suggesting that the status of women within academe (as in the broader society) continues to be a much contested issue given the dominantly patriarchal social order.

The marginal power position of women within Arab academe deprives them of "the power, resources, and opportunity to have any kind of widespread influence" in terms of pushing forward with innovative research fields, such as critical gender studies (Elsadda, 2002, p. 33). Moreover, as Elsadda further notes, deeply rooted "ambivalent attitudes of the intelligentsia" — whether religious or secular — about "the woman question," result in having "advocates of women's rights . . . stigmatized as westernized" and accused of "propagat[ing] ideas that aim to dismantle the very essence of Arab culture." A professor of English and comparative literature at Cairo University, she poignantly concludes regarding the marginalization of women researchers within academe:

Research on gender collides with some of the deepest fears in society. We are not just up against patriarchal anxiety about female power; we are also confronted with the cultural insecurities of postcolonial nations that are always on the defensive pertaining to issues of identity and their relationship with the outside world. These fears facilitate the manipulation and exploitation of gender issues in political struggles between conflicting forces in society. In this environment, no institution is capable of providing a secure and supportive environment for researchers in this field. (Elsadda, 2002, p. 33)

This marginality, Sabour (2001) observes, places the Arab academic woman, "socially, intellectually and psychologically in a contradictory position in a society experiencing ambivalent dialectical and historical transformations" (p. 70).

## PART THREE

### GEOPOLITICS, MILITARISM, AND ACADEMIC REFORMS

The expansion of higher education across the Arab states occurred in a period ravaged by colonialism, military conflicts, *coups d'état*, civil wars, and human populations displacement. The scholarly literature remains oblivious of this context and its impact on university governance and the “transit” of academic models across the Arab region.

Political instability, civil wars, and military conflicts affect the governance of Arab universities considerably. At the level of domestic politics, higher education institutions were brought into the orbit of the state's agenda following independence or military coups. In Sudan, the prolonged civil war triggered an extensive brain drain, leaving many academic departments devoid of senior academic staff. The consequences for the quality of research and teaching are incalculable. Moreover, following a 1989 military coup, Sudanese universities founded during the 1990s were part of Arabization and Islamization policies “aiming to create an Islamic state and a pious society” in a country shared by different cultural and socio-linguistic groups (Lesch, 1998, pp. 143–145). Safeguards ensuring university autonomy were abolished, effectively bringing higher education institutions firmly under state control (Lesch, 1998, pp. 152–154).

In Lebanon, as in Algeria, universities were affected by civil wars during the 1970s and 1990s respectively. With respect to Lebanon, Bashshur (1997) points out that the civil war “fragmented” and “disintegrated” the universities, catapulting the system “into chaos” as a result of assaults on infrastructure, faculty, and students. Post-civil war reconstruction saw intensive efforts to strike a balance between the state's supervisory role and the universities' autonomy in terms of accommodating the cultural and political diversity prevalent in Lebanon.

At the geopolitical level, military expenditure on weapons purchased from Western countries depleted resources and capabilities. Regional conflicts, the Arab-Israeli wars, and the Iraq-Iran and the Gulf wars most notably, decimated generations of students and scholars, while others were compelled to emigrate. Qasem (1995, pp. 90–92) pointed out that, over the last decades, Arab governments have disproportionately invested in military equipment and training as part of their Gross Domestic Product (GDP) compared with their investments in education. Looney (1992) further argued that since the early 1980s, several Arab governments have increasingly subsidized civilian higher

education and training in periods of extensive military build-up, expecting that the ensuing human capital would at some point serve in the military. Military cadres are often socialized and trained in a variety of civilian and military institutions, aiming towards their integration into elite positions within state apparatuses (Curmi, 1994). No research has probed the extent to which these processes affected institutional differentiation within higher education. There are also no insights regarding the expansion of military versus civilian institutions and how they differentially mediate post-secondary expansion as a whole.

War and military conflicts continue to play a determining role in the development of higher education in many Arab states. Iraq's invasion and occupation of Kuwait in the summer of 1990, and the ensuing conflict, affected universities across the region in many ways. The invasion damaged Kuwait University, as it destroyed other infrastructural facilities. Zahlan (1999, p. 272) notes that Kuwait University — “the leading publishing institution in the Arab world” at the eve of the Iraqi invasion — has recovered about two-thirds of its pre-war level of R&D activity by the mid-1990s. Following its invasion of Kuwait, United Nations sanctions imposed on Iraq severely hampered, among other things, scientific research in Iraqi universities for over a decade. Sanctions and deteriorated economic conditions limited faculty and student access to updated publications, computers and software, textbooks and international conferences. The increased interference of the Iraqi state in university administration and admissions policies represented the government's attempt to contain the repercussions of the sanctions within Iraq and the narrowing maneuvering space of the *Ba'ath* regime (Allaq, 1997).

More recently, the worldwide contested and opposed American and British-led military invasion and occupation of Iraq in the spring of 2003 triggered student rallies and demonstrations in university campuses across the Middle East and beyond. With the collapse of the *Ba'ath* regime, heavy casualties and losses were incurred by a weakened Iraqi civilian population. The looting of universities and other facilities ensued. With hostilities still ongoing, the occupying authorities hastened to control universities and other state institutions, initiating a “de-Baathification” policy. Del Castillo (2003a, September 12) reported that a large-scale purge of professors and academics accused of holding *Ba'ath* party membership resulted in “thousands of professors and all university deans and presidents” being dismissed by occupation authorities. At “the University of Basra, roughly 15 percent of the faculty members were fired, ... [and that at] ... the University of Baghdad, 5 percent

lost their jobs ... [while] at the University of Tikrit, 20 percent of the professors were dismissed". Admissions policies were also "revamped". Earlier, Del Castillo (2003, September 5) had also reported that an American former college president, and current president of a consulting firm, was appointed as "senior adviser to oversee the Iraqi Ministry of Higher Education and Scientific Research," with "broad powers to set a course for the future of higher education".

The impact of the American-British military occupation and "de-Baathification" policies on Iraq's higher education system is difficult to assess in terms of the academic governance models that will prevail, and the future course of state-university relations. This challenge notwithstanding, some writers seem to suggest that US higher education policy in Iraq may have long-term effects on the structures that will eventually govern higher education institutions. They stated that "the US is placing itself, with planned USAID higher education subcontracts to American universities, in a position to dominate Iraqi educational structures for the foreseeable future" (Watenpaugh, Méténier, Hanssen and Fattah, 2003, p. 27).

In Iraq's northern provinces, the American-British imposed "no-fly zone," coupled with other restrictions set on Iraq's government since 1991, allowed the universities of Salah al-Din, Sulaymaniyah, and Dohuk to operate within a Kurdish regional government, extenuating the impact of Iraq's central government for over a decade. Moreover, under the UN sanctions on Iraq, funds of the "oil-for-food program" covered, according to reports, about a quarter of their operating costs and most books were "donated from Unesco" (Del Castillo, 2003b September 12). In April of 2000, the universities' presidents issued a worldwide call to Kurd academics in the sciences to "start your journey back to Kurdistan in order to participate in the honourable life of our universities" (Kurdish emigrant academics urged to return, 2000). Notwithstanding, as Del Castillo (2003b, September 12) points out, many recognize that a political settlement, in which the structures of an Iraqi state would be negotiated, will affect the autonomy of Kurdish universities and their *modus operandi* within a reformed Iraqi higher education system.

#### *The American Model "Rules Supreme": The Case of the Gulf States*

Within the broader context outlined above, the shift from the continental to the American academic model in the Arab Gulf states deserves particular attention.

The continental (European) academic model has year-long compulsory courses and year-end examinations. Moreover, the state provides an over-arching regulative framework. In contrast, the American academic model, built around credit-hours courses, has mandatory and elective courses and more frequent examinations. Governance structures are secured through boards of trustees, which represent diverse constituencies and stakeholders.

Egypt was very briefly exposed to the French version of the continental model following Napoleon Bonaparte's military occupation in 1798. The model took roots under vice-regal rule. Reforms introduced by Muhammad 'Ali (1769?–1849, viceroy 1805–1848) and his successors along the nineteenth century dispatched hundreds of students and scholars to Europe, exposing them to European and particularly French institutions of higher education. Their experiences led some to publish “the first comprehensive analysis of the French educational system to appear in Arabic, and indeed, the first comprehensive discussion of *any* educational system in modern Arabic literature” (Abu-Lughod, 1963, p. 122).

The continental model survived British rule (1882–1922) and the British-controlled monarchy (1922–1952) to remain, *mutatis mutandis*, the academic framework of post-1952 republican Egypt. Following the 1952 coup, Egyptian universities and professors acted as carriers of the Egyptian version of the continental model, predominantly that prevalent at Cairo University, into other nascent Arab universities (Al-Ebraheem, 1991, pp. 1044–1045; Reid, 1990, pp. 199–200. See also Williamson, 1987). For the newly established Egyptian regime, these processes represented forceful attempts to counter-act the influence of Western institutions, such as the American, French, and British academic foundations operating in Egypt, Lebanon, and Sudan. Thus, Egyptian faculty members played a pivotal role in the foundation of the Khartoum (Sudan) branch of Cairo University and the Arab University of Beirut. Egyptian professors were also heavily involved — at all levels — in the foundation and management of nascent universities in the Gulf up to the 1970s, where Egyptian academic traditions were predominant.

Since the early 1970s, under the impact of the “oil boom” decade and the revenues it generated for Gulf governments, Gulf universities expanded considerably, shifting towards the credit-hours system — a pivotal component of the American model (Al-Badr, 1977). This gradually eroded Egyptian academic traditions and influence, opening the door to increased US and UK “educational diplomacy” and involvement in the Arabian Peninsula. An American advisory team, for instance, was



involved in the establishment of the Saudi Arabian Ministry of Higher Education in the mid-1970s (Al-Rasheed, 2001, p. 122). Following the first Gulf war in 1991, the process culminated in the foundation of fully-fledged American and/or other private universities in the UAE (United Arab Emirates), Qatar, Oman, and, most recently, in Kuwait (2004). In 2002, a joint American-Saudi university venture was approved, with the hope that “the project would bring [the] countries closer together at a time that relations between the two countries have been strained” following the September 11, 2001 bombings in New York and Washington, DC (World briefs, 2002).

Commenting on a new university founded in the UAE, one American consultant, a professor at the University of Wisconsin-Milwaukee, noted that the university is being “designed to reflect the typical design of colleges and universities in the US [. . . in order . . .] to facilitate transfers to US institutions and entrance to US graduate programs” (Halloran, 2000, pp. 329–330). Interestingly, the possibility of parallel accreditation — or its equivalent — with higher education institutions in other Arab states is not raised or discussed.

By and large, Gulf universities are being structurally “synchronized” with their American counterparts, whether at the level accreditation or at the level of curricula and student socialization, leading Coffman (2003) to observe that the American academic model “rules supreme” in Gulf universities. It should be noted that Coffman’s observation would apply primarily to the private universities in the Gulf. In contrast, the accommodation of the American model in Gulf state universities remains confined to the introduction of the credit-hours system and the reorganization of academic departments and faculties, reflecting the programs and disciplinary contents prevalent within US universities. In other respects, Gulf state universities remain governed and run by state officials and appointed committees. They are not governed by boards of trustees — a pivotal aspect of the social foundations underpinning the American model. This clearly shows that the less politically problematic aspects of the American model were accommodated in Gulf universities, while other aspects of governance were brushed aside. Thus, it could be argued that, in effect, the state continues to govern universities roughly along the lines of a “radicalized” continental model, or, at best, a hybrid assortment of governance models which negate the university’s institutional autonomy.

At any rate, at the regional level, the long-standing exposure of Gulf students and faculty to other Arab universities, most notably Egyptian, is being considerably lessened, if not rendered redundant, as



a result of the Americanization of Gulf universities. Some may view these shifts as reflecting processes of globalization and internationalization of higher education comparable to similar processes in other world regions (see Currie and Newson, 1998). Yet one should also dwell on the geopolitical corollaries and implications of such reforms. The Americanization and privatization of Gulf universities are occurring in conjunction with broader regional and global realignments of military and strategic alliances. The mechanisms underpinning this process still await solid research, not only with respect to the role academic models play in the implementation of foreign policies, but also with respect to the impact academic models exert on regional economic and political (dis)integration.

#### PART FOUR

##### THE CRISIS OF THE STATE AND THE RESTRUCTURING OF HIGHER EDUCATION

From the mid-1980s onward, the majority of the Arab states faced severe fiscal crises, exacerbated by internal economic instability, increasing political contestation and rising globalization and competitiveness. Not unrelated, the political ramifications of the Gulf war, and their onerous economic costs, affected more than just the states in the Arabian Peninsula that were directly involved in the conflict. Other Arab states, such as Egypt, Jordan, Sudan, Syria, and Yemen, which depend on remittances from migrant labor employed in the Gulf, also felt the consequences. Some states, such as Egypt and Jordan (addressed in greater detail below), faced severe liquidity challenges, further aggravated by the difficulty to negotiate loans from international funding agencies, such as the World Bank and the International Monetary Fund (IMF).

The field of higher education stands at the epicenter of this fiscal crisis. Under the title “Higher Learning,” an editorial published in the Arabic weekly *Al-Ahram* captured, in a telling way, the impact of this crisis on Egyptian higher education, the largest provider of higher education in the Arab states:

Their very existence seems to suggest that the state universities can no longer bear the burden. The “great universities” — Cairo, Alexandria, Ain Shams — symbolize the age of liberalism as well as liberation from colonial rule. They are considered by many to be truly “national” institutions. They are also concrete reminders of the

Nasser period, during which new classes began to benefit, in ever increasing numbers, from higher education. Yet, today, many of these universities are beginning to show the strain. Chaotic libraries, an overtaxed administration, classrooms filled to bursting, professors on the verge of a nervous breakdown: all seem to be signs of the times. (El-Bahr, 1998)

Calls for privatization and the restructuring of higher education were already made during the 1980s. Some eagerly advocated the privatization of higher education, as part of the downsizing of the state's regulatory role (Badran, 1989, pp. 23–24). World Bank and IMF reports more specifically called for effective screening mechanisms on access to public higher education (Zhiri, 1992). Reports further supported a rescheduling of state investments in higher education as part of the implementation of structural adjustment policies. This included a diversification of higher education training and study programs, the re-allocation of budgets earmarked for the improvement of basic and formal education and redressing the enrollment imbalance between high school academic and vocational tracks (Haddad, 1994, pp. 72 ff.; Zhiri, 1990, 1992).

Against this backdrop, the debates within Arab societies on the restructuring of higher education have assumed increasingly critical overtones (e.g., Abou-Chacra, 1991; Fergany, 2000; Muhsin, 2003; Rida, 1994). The “growing gap between quality of graduates and labor market needs” (Mograby, 2000, p. 299) is raising serious concerns about the relevance of higher education. This is particularly true in the Gulf states, where imported workers “build our homes, repair our cars, fix our televisions and run the production lines in our factories” (Al-Sulayti, 2000, p. 275). In these states, the lack of a locally trained workforce exerts mounting strains on the political stability of current institutional arrangements and the perceived national identity and cultural heritage of Gulf societies. More generally, across the Arab states there is a “move toward developing a more coherent and integrated system [. . . in order . . .] to achieve more coherence and consistency between education and various labor market policies and employment” (Al-Sulayti, 2000, p. 276). In the process, the established meanings of an Arab university—and of higher education in general— are being adamantly challenged socially, politically, and economically.

#### *Restructuring Higher Education: Two Examples, Egypt and Jordan*

The public debate on the restructuring of higher education is particularly intense in Egypt and Jordan. These two cases deserve particular

attention given the multifaceted contrasts and insights they offer. Egypt, the largest Arab state with over 68 million inhabitants, and Jordan, among the smaller Arab states with less than 5 million inhabitants, have both embarked, since the late 1980s, on extensive reforms of their economic systems. Undertaken within the framework of World Bank and IMF Economic Reform and Structural Adjustment Programs (ERSAP), these reforms meant greater economic “openness” to foreign direct investments; the retrenchment of the state in terms of its involvement in the market; and the privatization of wide sectors of the economy, including in the field of higher education. The major aim of these policies is to promote competitive local markets, “integrated” within the broader global economy. Yet, as will be discussed promptly, these policies acquired a different momentum in each setting regarding the impact of restructuring policies on higher education governance.

Egypt was “one of the first developing countries to contemplate privatization” as part of economic restructuring policies (Posusney, 2002, p. 43). The enactment of Law No. 43 of 1974, which aimed to attract foreign and Arab capital, initiated Egypt’s move from a state-controlled to a market economy. And yet it was not until 1991 that the major legislation on privatization was enacted. Law No. 203 for 1991 — whose constitutionality was debated in court — paved the way for the privatization of government enterprises and signaled the government’s effective engagement with ERSAP reforms. In the field of higher education, restructuring and privatization were henceforward facilitated by a series of legislative reforms introduced throughout the 1990s. These initially amended the Universities Law No. 49 of 1972, the foundational framework governing public higher education institutions (Hyde, 1978, pp. 118–123). Legislative reforms moved on two fronts conjointly, sanctioning, such as in Law No. 101 of 1992, the establishment of private universities (Baghagho, 1994) and restricting, such as in Law No. 142 of 1994, faculty participation in decision-making within the public universities. In fact, the latter law added the selection of deans to the list of university officials already appointed by the Minister of Higher Education and Scientific Research; this list already included officials such as presidents and vice-presidents (Saleh, 2000, pp. 241–242). On the implications and consequences of this legislation, Kienle observes:

Consequently, university councils — comprised by the president and vice-presidents of the university, several ‘experts’ chosen by the minister, and the deans — were henceforth made up entirely of appointed members. All budgetary, educational and scientific decisions were therefore taken without any participation from ‘below’.

Finally, the new law also affected the composition of the Higher Council of Universities (*Al-Majlis al-A'la li al-Jāmi'āt*), which, in spite of the far-reaching powers of the minister of education and the government, played a role in the elaboration and implementation of relevant public policies. Henceforth, the council comprised only presidents of universities and a small number of 'experts' appointed by the minister; deans were no longer represented, whereas previously each university council had appointed one dean to sit on the university council. In a sense, the change was only logical as the deans' only distinctive feature was that they were chosen from below; once they were appointed by the university presidents they became redundant in a council where everybody else was also appointed from above. Even if their absence was not significant in itself, it was the extent that it was not compensated for by the presence of other elected members. Like the university councils, the Higher Council of Universities, had become an assembly entirely appointed by its hierarchical superiors. (Kienle, 2001, p. 76)

Despite these policies, private for-profit universities were not effectively licensed in Egypt before 1996. Moreover, state-owned universities remain, by and large, the pillar of Egyptian higher education provision. Higher education privatization remains slow, much debated and challenged, and faces substantial resistance. In 1999, about 6,000 out of the 1.5 million Egyptian university students attended private universities (that is, less than one percent) (Frag, 1999, p. 16). By 2001–2002 their number almost quadrupled, reaching some 22,000 students, according to a ministerial statement to Egypt's Consultative Council.

In contrast, in Jordan, the Private Universities Act No. 19 of 1989 paved the road for private universities. Following the Gulf war of 1990–1991, the forced return of Jordanian and Palestinian capital owners and academics who worked in the Gulf coincided with the implementation, within Jordan, of economic restructuring programs. Investments in private university ventures were thus significantly facilitated based on the 1989 legislation. Within half a decade, private universities outnumbered their state counterparts, doubling the number of universities operating in the country (Bader, 1994). A decade later, the Private Universities Law No. 9 of 1999 further recognized the right of the private sector to found and administer private universities. In 1990, 1,324 students enrolled in the first private university (Burke and Al-Waked, 1997). By the turn of the decade, over a third of the approximately 120,000 university students were studying in private universities, taught by over one third of all university faculty members (Hashemite Kingdom of Jordan, Council of Higher Education, 2000). Reiter (2002) argues that

[t]he decentralization of the public universities on the one hand, and the establishment of private universities on the other, were only two aspects of a policy that changed the social balance of university students and faculty members between the two large ethnic communities: Transjordanians and Palestinians. (p. 144)

He further states that private universities in Jordan are “a Palestinian phenomenon, even if no one states this explicitly” (p. 157).

The emergence of private universities in Egypt and Jordan raises pivotal questions about the political underpinnings accounting for the nexus between globalization and the restructuring of higher education. In these two countries, the introduction of private universities and the parallel reorganization of public universities are integral parts of restructuring policies. These policies are accompanied by heated — often vehement — debates between opponents and supporters. Yet, it seems that the debate has somewhat abated in Jordan, shifting from generalized polemics around the very idea of a private university in the early 1990s, to issues of regulation, accreditation, and quality assurance by the end of the decade. The major concern is to prevent private universities from becoming “shops” of sorts (*dakākin*), as referred to in popular parlance.

In Egypt, despite a decade of university privatization, public contestation and resistance remain considerably high (Farang, 1999, 1994, pp. 268–281).<sup>3</sup> The challenge originates more particularly from the quarters of state-employed professoriate (see Baghaghho, 1994) and the professional syndicates which also represent mainly public service employees. Opponents consider private universities as contributing to the “cultural dependency” (*tabā’iya thaqāfiya*) of Egypt on Western knowledge. Others consider private universities to operate as institutional platforms that assist Western powers to encroach on Egyptian sovereignty, reminiscent of the colonial subjugation of Egypt in previous periods. Still others oppose private universities on the grounds that they are, as El-Nahhas (2002) reports, “at odds with the principles of the 1952 Revolution which calls for equal access to educational opportunities for all citizens.” She further reports that, with the establishment of private universities, “critics contend [that] a two-tier system is effectively set up under which the wealthy have access to a higher quality education.” Opposition to Law No. 101 of 1992 (and subsequent legislation and amendments) springs also from the deeply seated corporate power of state-employed

<sup>3</sup>Regarding the Higher Education Enhancement Project (HEEP), signed in 2002 by the Egyptian government and the World Bank, see World Bank (2002, March 7).

faculty members who, among other things, are reluctant to compete with a newly formed category of faculty members employed in the private universities. Labeled by some outspoken opponents as “investment universities,” private universities are perceived as “bring[ing] in fast, non-risk profits” (El-Bahr, 1998). In contrast, arguments in favor of privatization build on “empirical studies show[ing] that upper socio-economic status (SES) is disproportionately represented in free public institutions of higher education.” The explanation is that upper SES students “are more likely to pass the entrance examination to selective public universities, [and] are more capable to succeed and bear the forgone earnings” (Sanyal, 1998, p. 35). Thus the debate around the idea and feasibility of private universities in Egypt remains indicative of deeply seated ideological, social, and political divisions and power struggles prevalent between distinct constituencies.

State–private university relations remain strained in Egypt. The state is caught between World Bank conditional loans that require greater privatization (“openness”) and legislative reforms, and the opposition of local constituencies on which the state desperately depends for legitimacy and political support. Within this double-bind, the Egyptian state has proceeded so far with caution, making its way along an uneasy and conflict-laden path. It licenses private universities on the one hand, but heavily regulates and supervises their admissions quotas and internal governance on the other, in attempt to minimize public criticism and resentment. In May 2002, the Minister of Education amended the procedures of the law on private universities in a way which grants the state greater supervision over “target admissions, the appointment of presidents and boards of trustees and the procedures for establishing new universities.” The amendment also replaced the private universities committee with the Council on Private Universities, “charged with assessing the performance of private universities” (El-Nahhas, 2002).

While some presidents of private universities appeared to welcome these amendments, which perhaps shielded them from their own boards of trustees, trustees (many of whom were shareholders) were themselves much less enthusiastic. Some considered such measures as a flagrant intrusion into the internal governance of private universities, observing “that there is a big difference between supervision and interference, and between private and state-owned universities.” Moreover, to counter the claims of critics regarding the undue foreign influence associated with the operation of private universities, legislation determines the relative weight of local capital ownership invested in private universities and

held by shareholders (Frag, 1999, p. 17). In this sense, official discourse incessantly stresses that private universities are “Egyptian.”

The privatization of universities led to the emergence of a two-tiered regulatory framework in Egypt. On the one hand, the Supreme Council of Universities (SCU) has jurisdiction over all aspects pertaining to policies and regulations governing higher education. It includes one member representing private universities, on a rotating basis. On the other hand, the Council on Private Universities (CPU) more specifically regulates private universities. It includes on its board representatives from all private universities, as well as representatives of the state (e.g., El-Nahas, 2004 January 15–21; 2004 February 26–March 3).

The uneasy posture in which the CPU is caught reveals the complexity of university privatization in Egypt. The CPU is expected to implement state policies on private universities, occasionally endorsing penalties imposed by the state on noncompliant member universities. Yet, in several cases over the last years, clashes occurred between private universities and the state over admissions quotas and matters pertaining to their internal governance. In other cases, private universities were directly challenged by professional associations, such as the Physicians’ Syndicate, the Pharmacists’ Syndicate and the Engineers’ Syndicate, over the licensing and employment conditions of graduates from private universities or regarding admissions quotas to scientific specializations. Some of these cases ultimately ended in the courts, not without private universities occasionally carving out greater space in the broader higher education and employment landscapes.

In Jordan, the scenario surrounding private universities has been somewhat different, although it retains some similarities with the Egyptian case. While the Jordanian state does impose criteria regarding operational standards on private universities — often considered by private universities as unjust, harassing or unrealistic — the state has also accommodated the new reality of private universities by phasing out, in 1998, the Ministry of Higher Education (Higher Education Law No. 6 of 1998). The Ministry was disbanded 13 years after its creation in 1985, and was replaced by a Council of Higher Education, on which private universities were substantially represented. This clearly signaled to the private sector that the higher education field welcomed investments, and that state interference and regulation would ostensibly be minimal.

However, the rapid expansion of private institutions and concerns over the quality of instruction compelled the state to reinstate the Ministry of Higher Education and Scientific Research as a regulative



body in 2000. Provisional Law 41 of 2001 cancelled the 1998 legislation and merged the Council of Higher Education into the reinstated ministry. Presided over by the Minister, the Council comprises representatives of public universities, the accreditation agency, as well as four presidents chosen from among the private universities on a rotating basis. In addition, the Council's membership included seven representatives of the public, of whom four should represent the private sector. These guidelines notwithstanding, relations between the state and private investors in higher education started running on a collision course following a new law on private universities passed by parliament in 2001. The law prescribes a clear separation of the financial and the academic decision-making processes within private universities. It extends the jurisdiction of university presidents over financial matters and limits the investors' intrusion into the decision making process. For investors, this effectively meant less control over profits, and less maneuvering space in terms of dictating internal decision-making within the private universities. Yet, more than anything else, the 2001 legislation brings some closure to the restructuring policies of the late 1980s. It signals a certain return of the state, this time as a regulator of a higher education sector dramatically transformed over the last decade, when restructuring policies were first implemented.

In examining Egyptian and Jordanian higher education policies in the 1990s, one notes that Egypt formalized the structural and institutional distinction between private and public institutions. These are regulated through distinct governance structures, both external and internal. Moreover, the state remains somewhat hesitant in terms of allowing a radical opening of the higher education field to private investors; it proceeds rather cautiously, mindful of the political intricacies and issues at stake. In Jordan, a different dynamic may be observed. Restructuring has been dramatic, with the higher education landscape taking radically new institutional forms within less than a decade. Equally important, state apparatuses were also showing signs of responsiveness as representatives of both public and private universities shared seats on the same — and only — council regulating higher education policies, despite and beyond ongoing public debates regarding the quality of higher education. The formal and substantial representation granted to the private sector, and the temporary phasing out of the Ministry of Higher Education, suggest that the state is less inhibited, ideologically and politically speaking, in divesting itself in this regard.

In both Egypt and Jordan, privatization also occurred in tandem with significant changes in the internal governance of public (state)



universities. In Egypt, public universities were allowed to levy fees in some programs of study, such as foreign language (Frag, 1999, p. 16) or English-taught business administration programs. Indirectly, this may be considered as the first sign of competition between public and private universities over students and faculty. In other cases, higher admission fees are levied from students who are not admitted through the usual procedures (Sanyal, 1998, p. 16), despite broader criticism leveled against these arrangements on grounds of social equity and fairness.

Other measures in the public universities targeted the professoriate, one of the most politically sensitive and conflict-ridden issues in the restructuring of Egyptian public higher education. Thus, Law 82 of 2000 introduced new measures regarding the retirement age and compensation of the older age-cohorts on the professoriate. Fiercely and vehemently criticized by opponents, the new legislation and the minister's policy were rhetorically compared to, among others, "the Mongol invasion" and "the burning of the Alexandria Library" (Salama, 2003). Other measures introduced by the Ministry of Higher Education and Scientific Research facilitated the assignment of professors from public universities to their private counterparts, as a "token of the Ministry's support to the experience of private universities, considered as one of the complementary bases of university education" (Arab Republic of Egypt, 2004). For opponents, this policy provided further evidence confirming the state's intention to weaken this powerful sector of the public labor market. In fact, by the mid-1990s, the state reduced its expenditure on universities to 85 per cent of their total budgetary allocation, with universities complementing their budgets by diverse other means of income generation (Sanyal, 1998, pp. 16–17). Moreover, plans were already announced to substantially increase the number of private universities allowed in Egypt, as well as the percentage of students eligible to study in these institutions.

In Jordan, governance reforms currently allow public universities to raise funds from private and corporate sources with a view to founding new chairs and programs of study. Thus, higher education restructuring is not limited to a redefinition of state-university relations, as stipulated through the various acts of legislation mentioned above. It is, rather, part of broader structural changes effected in the internal governance structures of the universities in terms of granting them greater maneuvering space to generate their own financial resources. The ultimate aim is, according to a statement by the Minister of Higher Education, the "phasing out government financial support for university current expenditure hand in hand with re-structuring" (Maani, 2002).

While this means the establishment of boards of trustees in public universities also, these changes remain confined at this time. Plans are underway gradually to introduce differential “financial incentives” to universities based on their compliance with accreditation, excellence in achievement, innovativeness, and engagement with research. These plans further stipulate that “[a]ny restriction on establishing new private institutions of tertiary education should be lifted in the presence of strong and active accreditation policies” and “[u]niversity high officers in public universities should be selected through search committees.” Ultimately, the Provisional Law on Private Universities of 2001 would have “to be amended to reflect: complete separation between university ownership and administration defining new rules for licensing of universities and other tertiary education institutions” (Maani, 2002).

The dynamic expansion of the higher education sector in Jordan, within the broader legislative reforms restructuring the labor market, affected the status of the professoriate in several respects. Economic restructuring increased the competition between Jordanian and other Arab expatriates over positions in the universities. Migrant academic labor is being attracted into Jordan from neighboring Iraq, Syria and Palestine where professorial salaries are as much as three times lower. One Jordanian unemployed individual who holds a Ph.D. in history explained that universities “do not want to employ Jordanians because they know that Jordanians will want higher pay and also fight for their rights.” He added that, “[c]oncerning non-Jordanians, universities are free to treat them as they wish, regardless of their complaints. They intimidate and implicitly threaten non-Jordanians who are scared of losing their jobs. The universities could not do that with Jordanians” (Keilani, 2000). Moreover, Cambar (2001, p. 198) points out that the substantial erosion of the salaries of the professoriate in public universities leads many to explore employment opportunities in the private universities, either in part-time capacities or paid by the hour. This further contributes, he observes, to a lack of autonomy of the professoriate as a whole.

Critics in both Egypt and Jordan point to the negative effects restructuring policies are having on socio-economic disparities in access to higher education. Some welcome the introduction of interest-free student loans, aimed at assisting students from socio-economically disadvantaged groups. Others, including the World Bank in the case of Egypt (World Bank, 2002, p. 41), discourage such loans, on grounds that they hamper the efficiency of restructuring policies, among other things. As a result, the restructuring of higher education in Jordan and Egypt

advances on two fronts simultaneously: securing an efficient implementation of restructuring policies, and compensating groups negatively affected by their consequences, a difficult feat by all accounts. In both states, special measures were enacted to provide support systems for students from marginalized and economically weak social groups. This has been done, as a matter of example, by instituting student loans for those who could prove their entitlement, or through the establishment of special quotas for constituencies on which the state relies for political support and legitimacy (as in Jordan). Critics argue that such measures remain limited in their ability to provide a fair and equitable access to quality higher education.

#### *Reforms, Accreditation, and Quality Assurance*

The restructuring of higher education, and the surrounding debates, are not peculiar to Egypt and Jordan, assuming different dynamics in the various Arab states. During the 1990s, legislative reforms were effectively introduced in almost all Arab states as part of the restructuring of higher education and the accommodation of private tertiary institutions. For instance, private higher education expanded rapidly in the Gulf states, notably in the UAE, Yemen, and more modestly in Tunisia, where commercial-type institutions operate (‘Amr, 1994, p. 91; Sanyal, 1998, pp. 15–16). In Saudi Arabia, “nonprofit organizations in the private sector [are] given permission to provide higher education . . . as demand for higher education exceeds the capacity of public universities and other public colleges” (Bahurmoz, 2003, p. 70). Oman, which did not operate its first university until 1986, witnessed extensive privatization of its higher education system. In 2002, one private university and 13 private colleges were already active in this Sultanate (Al Riyami, 2002). These numbers notwithstanding, a UNESCO (2003) document stated that:

[T]here is as yet no evidence that these new universities have succeeded in lifting the strain and alleviating the pressure on the higher education system in the [Arab] region. Nor is there any evidence, with few exceptions, that they have provided students with more diversity or are succeeding to meet the needs of students, society, the labour market and the requirements of the global economy. (p. 7)

In most Arab states, the major concern in the restructuring of higher education remains the links between higher education and labor market needs (Fergany, 2001; Hasan, 1999; Watfa, 1998). This concern has

become the leitmotif underpinning two reforms which currently dominate restructuring policies alongside privatization, namely, quality assurance and the reforming of technological higher education. The former concerns the accreditation of study programs and the development of unified standards by which to evaluate their performance. The latter concerns strengthening the contribution of technological higher education to local labor market needs, in terms of training a workforce able to engage meaningfully with advanced technologies, increasing economic competitiveness and ever-changing markets.

Current accreditation agencies remain limited in their role in many Arab states, despite moves undertaken towards strengthening their jurisdiction. Interestingly, the Convention on the Recognition of Studies, Diplomas and Degrees in Higher Education in the Arab States, signed as a UNESCO registered instrument in December of 1978, recognizes formal academic qualifications issued by higher education institutions across the Arab regions, “denoting that a full course of studies at the higher level has been completed to the satisfaction of the competent authorities” (Article 4[a]). Fewer efforts, however, were deployed to accredit higher education programs (as distinct from qualifications) and develop standards for their operation. At the Arab Regional Conference on Higher Education, held in Beirut (Lebanon) in 1998, the ministers in charge of higher education adopted a resolution regarding the establishment of “a regional mechanism for quality assurance and accreditation under the auspices of the Association of Arab Universities [complemented by] similar mechanisms at the national level” (UNESCO, 2003, p. 9). The authors of the 2003 *Arab Human Development Report* reiterate the call for “[a]n independent Arab organisation for the accreditation of higher education programmes” to be established, considering it “a major step” in mitigating the “profit motives” of higher education institutions and in preserving the “public interest” (UNDP, 2003, p. 168).

According to Badran (2000, p. 105), the lack of regulatory accreditation mechanisms negatively impacts the relevance and quality of Arab higher education in the global market economy. He notes that two conditions must be met to remediate this situation: “[t]he first is a clear commitment towards science by governments and politicians, and the second is a broad investment in capacity building — the strengthening of scientific infrastructure and the development of human resources” (p. 130). For Arab universities, this means that the challenge “is to become both centers of excellence for quality higher education and centers of R&D to advance knowledge and its applications to commercial technologies” (p. 133). Badran stresses the need to rethink the role of

Arab higher education institutions by diversifying their structures and multiplying links among research, industry, and commerce (pp. 133–135).

Furthermore, the lack of established accreditation mechanisms renders student transfer between institutions a challenging operation, at best. It further stratifies institutions into differential opportunity structures, which largely reproduce inequities associated with high school graduation. The distinctions among community colleges, technical institutes, and universities (to name but a few) often operate as mutually exclusive post-secondary tracking systems, locking both faculty and students into highly incommensurate opportunity structures (see e.g., the arguments raised by Al-Tal and Ashour, 1993).

According to a recent UNESCO document (2003), the introduction of accreditation systems at the national level is “still in its infancy” in several Arab states (p. 10). Existing initiatives adopt one of two major modes. In a few cases, mandatory quality assurance bodies have been established, with jurisdiction over all existing and prospective higher education institutions. In other cases, quality assurance mechanisms retain a coordinating function, facilitating initiatives at institutional and national levels to establish evaluation frameworks.

Accreditation and quality assurance present a contested terrain. First, a major challenge lies in extending accreditation to all public and private institutions, and not just to the newly established private universities or colleges. This is often a major point of contention between private universities and the state. Representatives of private universities view the accreditation procedures to which they are subjected as control mechanisms imposed by the state, while respective programs in public universities are exempted from accountability. Second, faculty resistance, particularly in public universities, is often an obstacle. Third, it remains unclear how an “independent” accrediting mechanism could be guaranteed within highly centralized and hierarchical Arab higher education systems. Accreditation agencies are normally housed within the state ministry in charge of higher education. This often serves, critics argue, as a potent political tool through which the centralization of decision-making is further reinforced by the state. Fourth, establishing accreditation and quality assurance mechanisms is likely to exacerbate institutional conflicts, particularly given the disparate and diversified backgrounds of the professoriate in some Arab states. For instance, in the *Maghreb* states (Algeria, Morocco, and Tunisia) the diversity of degrees held by the professoriate — “local” and “foreign” (French, Russian, and other) — already significantly hampers the efficiency of

the higher education system (Ben Sedrine and Gobe, 2001; Scarfo-Ghellab, 2001). Kadri's (2000) study of the training of Algerian academics and professionals in Western and other higher education institutions in post-colonial Algeria illustrates the point. Initially, training abroad aimed to reduce Algeria's dependence on foreign (mainly French) academics and professionals. To that end, young Algerians were dispatched abroad in order to facilitate their recruitment into the Algerian professoriate upon their graduation. However, this practice has other consequences:

In that way, training abroad ultimately redoubled the established hierarchies between those who had a foreign training and those who were trained locally, thus accentuating the devaluation of the institution; it contributed to the fragmentation of the professoriate according to their prior trajectories and the countries in which they were trained; it produced cleavages, raised sterile competitions focused on a system of equivalence and statutes, thus further destabilizing the institution. (Kadri, 2000, p. 218)

Under such conditions, devising accreditation and quality assurance systems may paradoxically intensify institutional and systemic conflicts over the very definition of performance and quality standards. This is likely to occur as faculty members and senior administrators are trained according to different professional traditions, themselves rooted in competing international market dynamics. Moreover, as has already been suggested by Abu-'Ishsha (2000) and Khelfaoui (2000), given the lack of an established and shared institutional academic culture of faculty members affiliated with distinct linguistic communities, any definition of quality indicators is likely to be perceived as an attempt by any one party to impose its values and world views on the other. Proponents of accreditation and quality assurance seem to neglect the impact of this reality, at least as far as *Maghreb* higher education is concerned.

The reform of technological-vocational higher education presents a second front of challenges facing the broader restructuring of higher education. Serving as a less prestigious default track to the academic programs of study operating within the universities, it has remained largely under-funded and, in some cases, outdated. More recent policies have attempted to define a more central and coherent role for this educational sector in the broader restructuring of the economy. For instance, in the UAE, Higher Colleges of Technology (HCT) have been established since 1988 to facilitate the emergence of a locally trained indigenous workforce — both men and women — to be employed in the private and public sectors. HCT programs provide a variety of

training options in business, engineering, communication technology, and health science. They differ from universities in that they offer employment-directed training to several thousand UAE nationals. Mograby (2000, pp. 293–294) points to the limited contribution of these institutions to the enhancement of an Emirati-trained labor force. He remains quite skeptical regarding their contribution to the alleviation of the UAE's overwhelming dependence on a non-national workforce (pp. 294–295, 302–303). He realizes that, under current growth rates, local training institutions would not be able to supply more than seven to eight percent of the needed Emirati workforce by 2005 (p. 295): "This means the labor market will continue to tap into its pool of expatriate labor to meet its immediate needs. Such reliance on expatriate labor will have a depressive effect on wage levels in certain sectors and occupations, thus driving away nationals further from productive employment in technical fields" (p. 295).

Indeed, the dilemmas associated with the restructuring of technological-vocational higher education remain particularly acute in the Gulf states, given their higher reliance on imported labor. Yet, in the *Maghreb* states as well, the restructuring of this higher education sector continues to pose considerable challenges. With respect to Algeria, Khelfaoui (2000) shows that the institutional differentiation between academic and technological higher education institutions, initially modeled along the French example, has become largely detrimental to Algeria's development. The distinction between types of academic and technological higher education institutions has effectively balkanized the system among various power elites, preventing the provision of a meaningful higher education. Despite these challenges, different restructuring models have been explored in the *Maghreb* states. In Morocco, partnerships were established between private and public institutions of higher education (Chraïbi, 1998). These partnerships follow the "contract training" model, in which "universities contract directly with private companies to provide graduates who have been trained in skills tailored to a specific employer's need" (Zhiri, 1992, p. 61). In the case of Morocco, while training takes place in private institutions, graduates obtain a publicly-sanctioned degree.

The above examples suggest that some Arab states are moving towards a more integrated higher education structure, in which the differentiation between academic and professional training is rendered more flexible as part of a broader adaptation of university education to market needs. The impact of these reforms is still difficult to predict.



*Transcending Boundaries: Open Universities and Regional Systems of Governance*

Restructuring initiatives have not been limited to established universities. Rather, new forms of university foundations, largely based on the model of Britain's open university, have been introduced since the early 1990s. Their emergence signals the formation of a new layer of regional higher education cooperation concerned with pan-Arab academic institutions whose mandate to actually provide higher education services transcends the boundaries of any particular nation-state.

Senior officials of the Arab League Educational, Cultural, and Scientific Organization (ALECSO) admit, however, that pan-Arab open universities and other distance education initiatives usually encounter difficulties that hamper — if not totally prevent — their foundation, “considering the political atmosphere in the region” (Alsunbul, 2002, p. 76). What these officials probably mean to say is that the political fragmentation and ongoing rivalries opposing many Arab states weaken the political support needed for the foundation and operation of universities and other academic institutions with a pan-Arab mandate.

The first full-fledged Arab open university remains Al-Quds Open University (QOU), a Palestinian institution founded in Jerusalem in the latter half of 1991. Contacts for its establishment were undertaken between UNESCO and the PLO as early as the mid-1970s, and its first television and radio programs were launched in the mid-1980s. QOU's offices in Amman function as a liaison office coordinating educational matters with the Jerusalem headquarters. The institution extends its services to seven “educational regions” and operates study centers. Based on a credit-hour system, the university grants the equivalent of a B.A. and B.Sc. in a wide array of specializations in the humanities, social sciences, sciences, and educational technology.

In the late 1990s, QOU was admitted to the Association of Arab universities (AARU), becoming the first Arab higher education institution of this type to join the association. Since then, open universities have been launched in several other Arab states, most notably in Libya and Algeria, countries extending over vast territorial distances. Of late, a state-operated and managed “Virtual University” (*jāmi'ā iftirādhīya*) has been announced in Syria in mid-2002. At the same time, the Arab Open University (AOU) was launched with the support of the Arab Gulf Fund for United Nations Development Organizations (AGFUND), with stated plans to extend futures services and programs to Kuwait, Saudi Arabia, Bahrain, Jordan, Lebanon, and Egypt.



With its headquarters based in Kuwait, and described as a pan-Arab institution, it is held that the AOU would foster cooperation in the field of higher education as countries in the region work to develop their higher educational systems in response to current challenges. The AOU maintains a partnership with Britain's Open University, and its accreditation and validation are administered by the Open University Validation Services (OUVS).

The emergence of open universities, whether at the national or at the pan-Arab levels, raises many challenges with respect to logistics, as well as with respect to external and internal governance. First, the dual approach to distance and open higher education, whereby a university offers outreach courses in addition to regular programs, is still limited. As a result, universities and open universities are perceived as largely incongruent forms of higher education, leaving the matter of the transfer of students into existing universities or even into the labor market largely unresolved. Alsunbul (2002) poignantly observes:

Much has to be done in the arena of accreditation since there is no pan-Arab, regional, or state organs shouldering this responsibility. In general, students obtaining distance education degrees from outside their countries do not know what to do with them since they are not recognized or accepted either by their government or the private sector, and in most cases universities do not allow entry to these students in order to pursue their graduate studies. This situation has to be corrected if concerned authorities want this pattern of education to continue. This chaotic accreditation issue is impeding the development of the movement and puts an ugly face to its reputation. (p. 70)

Second, issues of language are, yet again, of paramount importance. In this case, the adoption of Arabic, in conjunction with other languages of instruction, may have a "huge impact on accreditation, student transfer, government subsidy, and regional and international co-operation" (Alsunbul, 2002, p. 70). This is particularly so as Arab states have adopted different policies on Arabization (see Part Two, above).

Third, expanding the scope of open university systems means greater reliance on information technologies (IT). Al-Gharrab (2003) recently pointed out that this is undoubtedly one of the most serious challenges facing the spread of non-conventional forms of higher education across the Arab states. Some Arab governments exercise control and censorship over internet-based communications, "though these have relaxed" of late. More devastating, however, is the fact that, with few exceptions (e.g., UAE), in many Arab states the IT infrastructure remains

rudimentary, usage is expensive, and illiteracy rates remain considerably high.

## CONCLUDING DISCUSSION

This chapter started by observing that current studies have neglected the social, cultural, and geopolitical forces that shape the modes of governance prevalent in developing countries. By drawing on the case of the Arab states, an attempt was made to illustrate how these processes have further shaped the governance of higher education institutions in a particular developing region.

The trajectory of this chapter suggests that, from the advent of the first institutions — introduced under the impact of European hegemony and colonialism during the nineteenth and early twentieth centuries — mass public higher education systems expanded primarily from the mid-twentieth century onward. The process was largely associated with the emergence of the contemporary Arab nation-state and its political consolidation. Higher education institutions were caught within these multifaceted and totalized power struggles, whether these were part of decolonization or of economic, military, and ideological competition over regional hegemony, or even part of a broader transformation of the (domestic) bases of power on which the state relied for legitimacy and political support. Effectively mobilized to promote various political projects of the state, institutional autonomy was largely suppressed and collegial management remains virtually absent, whatever the model adopted. By and large, higher education institutions in most Arab states are still part and parcel of the apparatuses of the state.

While there is much debate about the restructuring of Arab higher education, the implications of these reforms for the negotiation of the structures of the state cannot be disregarded, nor can their effects on higher education governance be underestimated. The restructuring of higher education from the mid-to-late 1980s onward remains an open-ended exercise. It may be argued that it is less concerned with the “rediscovery” of the entrepreneurial and rejuvenating potentialities embedded in academe — potentialities illustrated by Slaughter and Leslie (1997) — than it is with the re-invention of the legitimacy of the state once it is deprived (or divested) of its academic cloak. Seen from that particular perspective, the restructuring of Arab higher education is, as the cases of Egypt and Jordan show, an attempt to re-invent the state and reformulate its legitimacy independent of academe, the economy,

and the labor market; that is, separate from the instruments of coercion through which ruling elites have long consolidated their dominant position. As we have seen, most notably for Egypt, this ideological and economic re-enactment of the state carries with it risks and perils that go far beyond the question of higher education restructuring. Thus, one justifiably asks, would the Arab state — rather than the Arab university — survive this restructuring wave *and* still retain its current political structures and meanings?

More central to our discussion is the need to capture the distinct layers underpinning the restructuring of Arab academe and the effects they exert on the governance of higher education.

To start with, this chapter suggests that Arab academe is a highly contested terrain, characterized by multi-layered structural dislocations effected by colonial legacies, state authoritarianism, civil wars, and military and geopolitical conflicts. These dislocations touch on different aspects concerned with the organization of the academic workplace; the regulation of the academic workforce; and the meanings attached to research, knowledge, and teaching. They have also resulted in the emergence of Arab higher education systems which mimic — both structurally and epistemologically — their Western counterparts and the knowledge they produce.

Under the dynamics of globalization, new modalities of higher education provision are currently being introduced, largely under World Bank and IMF programs, bilateral aid agreements or other donor agencies, with these bodies henceforward “setting the education and development agenda” (Torres and Schugurensky, 2002, p. 438). However, these modalities reproduce the structural (‘external’) aspects of higher education institutions rooted in other societies and cultures. At the same time, little efforts are expended to elucidate the epistemological issues undergirding these institutional transfers and what they imply for the development of meaningful governance regimes. This conclusion points to the possibilities and limits embedded in current restructuring policies. The latter largely aim structurally to reconfigure and synchronize the interfaces among higher education, the state, labor market, and society, largely along the lines compatible with Western economic conceptions of the knowledge economy. They do little in terms of addressing the social foundations underpinning the academic models transferred into the Arab states and how these could or should be re-enacted locally, to ensure their effectiveness and efficiency.

As we have seen, “the merely local” (Edwards, 2002) has been extensively chased out of academe, in some cases quite violently, at the

expense of importing knowledge and technologies to which Arab societies “did not have to contribute to the process” of their development (Zahlan, 1999, p. 269). For not a few Arab states, oil-generated revenues enabled this undertaking largely under the guise of development policies. In the process, local higher education institutions remained on the margins of the technology transfer effort, the more so over the backdrop of limited Arab economic (Zahlan, 1999, p. 273) and academic (Mor[si], 1996) cooperation. Sayigh (1999) more particularly observes that “the distance between engineering departments, schools, or colleges, and the users of engineering skills, such as the manufacturing industry, transport and communication, agriculture, and construction, remains wide and unabridged” (p. 250). Under these conditions, foreign consulting firms act as the major technology trade suppliers of Arab governments ultimately limiting the role played by higher education institutions in the development process. It is therefore safe to argue that neither the current governance models, nor the newly imported forms of higher education provision, would unleash the generative capabilities of individuals and institutions as long as higher education continues to operate in conditions of socio-cultural, political and economic subordination, within a broader context of inter-Arab political fragmentation. In fact, it is reasonable to expect that with the increasing retrenchment of the Arab state, and the privatization of higher education, not all universities will be equally successful at generating external income to supplement what the state provides. As Sanyal (1998, p. 28) indicated, the scope for service contracts remains extremely limited in those Arab states with an agrarian economy. It therefore seems reasonable to expect accentuated disparities and inequities among universities — whether within or between Arab states — in terms of offering a quality and worth wanting higher education to various gender, class, cultural-linguistic and regional groups.

Finally, processes of internationalization (Wit, 2002) and corporatization (Slaughter and Leslie, 1997) of higher education institutions, and more particularly the formation of strategic global alliances among major higher education providers (e.g., Universitas 21) add their onerous toll to the challenges facing higher education in the Arab states. These processes of corporatization contrast dramatically with the confined, fragmented and un-coordinated state of inter-Arab cooperation in the field of higher education provision, accreditation and quality assurance. Pan-Arab agencies such as ALECSO and the AARU, to name but a few, perform mostly a non-binding and coordinating roles. A concerted and pro-active regional policy on higher education governance remains largely lacking. For the observer, these contrasts do not only mean less

competitiveness in an era of globalization; that would be too obvious. These striking contrasts rather imply that the Arab states are increasingly becoming an expanding regional marketplace where externally packaged modes of knowledge production are consumed, with limited relevance for local and regional issues of social and economic development.

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#### 4. ARE STUDENTS REALLY RATIONAL? THE DEVELOPMENT OF RATIONAL THOUGHT AND ITS APPLICATION TO STUDENT CHOICE

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#### INTRODUCTION

The notion that people are rational decision makers has become an important part of the reasoning used for explaining the behavior of individuals in a wide variety of contexts. Early proponents of the use of rationality in understanding economic behavior, most prominently Adam Smith, posited that individuals (and organizations) would find it optimal to make decisions that would be in their self-interest and that acting in such a way would also lead to the optimal allocation of scarce resources within society. As noted by the contemporary economist Herbert Simon, “traditional economic theory postulates an ‘economic man,’ who, in the course of being ‘economic’ is also ‘rational’” in his behavior (1955, p. 99). The conventional definition of rational behavior usually holds that individuals have a well-defined set of preferences, and when faced with a set of choices, they will choose the option that maximizes their satisfaction (or utility). A utilitarian-based definition is offered by Rabin (1998) who states:

“Economics has conventionally assumed that each individual has stable and coherent preferences, and that she maximizes those preferences. Given a set of options and probabilistic beliefs, a person is assumed to maximize the expected value of a utility function ...”  
(p. 11)

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This type of restrictive view of what rational behavior means has been repeated most frequently in classrooms across the nation, and naturally such descriptions have invited criticisms from both within and outside of economics regarding the appropriateness of assuming that individuals act in a rational manner. The debate within economics is summarized by Monaghan (2003) who notes that significant numbers of individuals donate their time and money to charities, help others, give gifts to each other, and act in other ways that appear to violate the notion that individuals are purely self-interested. Also, Rabin (1998) reviewed a large number of studies from psychology, economics, and other fields demonstrating how, under some circumstances, individuals have changing preferences, make errors in judgments, do not pursue their own self-interest, and process information in ways that are not accounted for in typical economic models. More fundamentally, some have criticized the concept of “rational man” on the grounds that individuals do not actually make such formal calculations before acting. They note that rarely has an individual been observed optimizing a specific objective function when deciding what to buy in their local grocery store. Taken together, the argument is that the individual decision-making process is anything but rational, and cannot be adequately described by an economic model of individual behavior.

As applied to education, the concept of rational behavior has often been used as the organizing framework in a myriad of studies. Perhaps the main area where rationality has been used to examine an education issue is with regard to how students make decisions about their education. A considerable body of literature exists on how students determine how much education to acquire (Mincer, 1974; Cohn and Geske, 1990; Becker, 1993; Cohen and Huches, 1994; Butlin, 1999; Monks, 2000), and for those opting for a postsecondary education, where to attend college (Jackson and Weathersby, 1975; Chapman, 1981; Jackson, 1978, 1982; Manski and Wise, 1983; Hossler and Gallagher, 1987; Leslie and Brinkman, 1987; Young and Reyes, 1987; Hearn, 1988; Paulsen, 1990; DesJardins, Dundar, and Hendel, 1999; Perna, 2000; Toutkoushian, 2001; DesJardins, Ahlburg, and McCall, forthcoming), and once enrolled in college whether to continue to completion or drop out (Spady, 1971; Tinto, 1975; Price, 1977; Bean, 1983; Manski, 1989; Cabrera, Nora, and Castaneda, 1993; DesJardins, Ahlburg, and McCall, 1999; Braxton, 2000).

Those who have conducted such studies typically rely on models of the investment in human capital and the rationality of students to describe how students make these decisions. In a nutshell, the model

posits that students will weigh the expected costs and benefits of pursuing a college education and then choose to go to college if the utility of expected benefits outweighs the expected costs (Schultz, 1961; Becker, 1993; Cohn and Geske, 1990; Cohen and Huches, 1994). Likewise, when selecting a postsecondary institution, the theory posits that students will calculate the expected costs and benefits from each institution under consideration and then choose to enroll in the institution with the highest utility of net expected benefits. These models are used to help explain student choices and yield predictions of how students respond to changes in demand- and supply-related factors such as tuition, financial aid, family income, and opportunity costs. Research into student departure and retention has also been based on the expected benefits model. Although not often cited, Tinto's seminal research on student retention and departure also assumed that students were rational calculators, he notes, "a person will tend to withdraw from college when he perceives that an alternative form of investment of time, energies, and resources will yield greater benefits, relative to costs, over time than will staying in college" (1975, pp. 97-98).

As economic reasoning has increasingly found its way into the literature on student choice, criticisms have been raised regarding whether it is correct to posit that students act in a rational manner. One reason for this criticism relates to how people use the term "rationality." Definitions used by some individuals are often not consistent with the definition typically used by social scientists. As one observer has noted, rationality, as it is used "in ordinary language, often means something entirely different from what we [social scientists] have in mind" (Shepsle and Bonchek, 1997, p. 15).

To illustrate, consider the following example: A young woman decides to attend the local community college even though she has also been admitted to Harvard. Based solely on observing her action (her "choice"), some observers might say, "She is behaving quite irrationally." However, as used by social scientists, rationality does not mean that this woman should act in accordance with the wishes of others, or that she be so well informed as to anticipate all of the consequences of her actions.<sup>2</sup> In their study of student choice, Hearn and Longanecker (1985) assert that "[s]erious questions can be raised about the model's underlying conception from classical economics of the 'rational man'" (p. 494).

<sup>2</sup>"We certainly do not want to characterize any deviation from omniscient, godlike behavior as irrational, for then nearly all behavior would fall into this category" (Shepsle and Bonchek, 1997, p. 16).

Olson and Rosenfeld (1984) investigated the role that information has on obtaining access to student financial aid and noted that one of the factors that may limit college opportunity is “[i]f parents do not have the perfect knowledge typically attributed to the ideally rational customer” (p. 476). Hossler, Schmit, and Vesper (1999) state, “students going through a [college choice] process for the first, and possibly only, time must have experience and knowledge of seasoned observers . . . in order to effectively apply decision-making theory” (p. 153). The implication here is that for students to act in a rational manner, they must have perfect information about many facets of their college choice, such as the net price of and return on education. In practice, this is rarely the case due to the complexities with which institutions set financial aid policies and make offers to students, and the timing at which this information is revealed to potential students. However, a more fundamental question was raised by Jackson (1978) and Hearn and Longanecker (1985), when they argued that (for several reasons), students “. . . reactions to various prices and subsidies may not always be economically rational in the classic sense” (p. 496). In short, they observe that students may react differently to the type of financial aid offered by an institution, even if each form of aid resulted in the same reduction in net tuition.

In this chapter we seek to provide a better understanding of the concept of rational behavior and what it implies about student choice. In doing so, we begin by examining the historical development of the concept of rationality and rational behavior. While the phrase “rational behavior” is usually associated with the field of economics, its origins can actually be traced back over 2,000 years to the early days of Greek philosophy. History shows that philosophers intended rationality to be a very general concept. A rational individual was one who could take what they know and use reason to understand the world. This is in contrast to the restrictive view of some who believe rational agents need to have perfect information, or that rational individuals all use information in the same way, or that given the same information individuals will always make the same choices.

We then review the role of rationality in the conceptual models used by economists (especially the theory of rational choice), and highlight some of the common misconceptions that exist regarding rational behavior. We address some of the strengths and weaknesses of these models and discuss what can and cannot be inferred about individual behavior based on observation. We argue that examples of (purported) irrational behavior of students provided by observers may actually be

consistent with rational behavior. Whether behavior is rational, however, is based on the subjective valuations of schooling options of students, and these valuations are unobservable and can vary greatly among students, therefore little can be said about the rationality (or not) of their postsecondary choices. Furthermore, the notion of rationality is in fact much more general than may be implied by descriptions offered by Rabin (1998) and others. For example, rationality does not require decision makers to have perfect information, but rather that they try to make decisions given the information at their disposal. Through an explanation of the historical development of rationality, and what rationality does and does not say about student choice, we hope to enrich the literature on this topic and inform educators on how to apply rational choice theory to understand student decision making.

#### THE DEVELOPMENT OF THE CONCEPT OF RATIONALITY

The concept of reasoned or rational thought has its roots in ancient Greek philosophy and the development of rationality continues to this day. The literature in this area is voluminous, and an entire book could easily be devoted to its development. The best way to understand the concept of rationality is not to look for a definition in the dictionary; rather one should examine “the specific arguments and theories of the major thinkers who make up the rationalist tradition” (Cottingham, 1984, p. 1). This seems to us to be an effective strategy because “almost every attempt to define rationality tends to ignore the fact that the concept of rationality is an invention of human origin, that it was humankind which, during the process of autcreation, granted itself the criterion that was supposed to be the measure of its humanness” (Niznik, 1998, p. 11).

In this section our aim is not to provide a comprehensive historical account of the development of rational thought. Instead, we discuss a few of the major concepts and the individuals responsible for the development of these theories. By doing so we can illustrate how some of the theoretical problems that have arisen have been “reworked and reinterpreted” (Cottingham, 1984, p. 11) the “ultimate result of which was philosophy” (Niznik, 1998, p. 11). Our review shows that ancient philosophers intended rationality to be a very general concept. A rational individual was one who could take what they know and use reason to understand the world. This is compared to the views of some who believe rational agents need to conform to very restrictive assumptions,

such as having perfect information or being infinitely sensitive to differences in the alternatives presented to them. We will divide the review into four sections: pre-Socratic thought, Athenian philosophers, early modern philosophers, and twentieth century philosophers.

#### PRE-SOCRATIC THOUGHT

Fifth and sixth century B.C. Greeks lived in an anthropomorphic world in which “mythology was still the only method available either to record history or explain nature” (Brumbaugh, 1981, p. 5). The advent of Greek philosophy took place in a world in which there was “no science, no pure mathematics, no notions of the distinctions we automatically accept today between mind and matter, subject and object, animate and inanimate things, miracles and natural causes” (Brumbaugh, 1981, p. 5). For a variety of reasons, ancient Greek thinkers, such as the Ionians, began to question polytheism and their reliance on mythical explanations of nature. This questioning may have resulted from contact with well-established civilizations such as those in Egypt and Mesopotamia, from whom the Ionians (and others) gained insights about science and nature. It may have arisen from a sense of adventure, given that Ionians lived on the frontier of Greek society (Brumbaugh, 1981). The genesis of the questioning of the power of myth and the role of the Greek gods may also have arisen from the failure to find moral value in many of the Greek myths. In many of these stories featuring Greek gods, the deities behaved quite badly, precipitating individuals to search for answers about “nature” and how to live a “just life” that were not dependent on polytheism, superstition, and myth (Rauh, no date).

Even though none of his writings survived, as far as we know the first of the Greeks to devote his attention toward a *systematic* attempt at discovery was Thales of Miletus (624–546 B.C.). An engineer, his thinking was so pervasive that many of his contemporaries considered him to be the father of Greek science, mathematics, philosophy, and physics.<sup>3</sup> However, in order to “discover” these new ideas, “mythology had to be abandoned” (Brumbaugh, 1981, p. 11), and this was a real break from tradition.

In his search for an answer to the question, “What are all things?” Thales had to assume there is “enough system among the infinite variety

<sup>3</sup> Also, Thales was identified by his contemporaries as one of the famous Seven Wise Men (*Sophoi*) of the age of antiquity.

of things in the world to permit some sort of single answer. This assumption marks the beginning of philosophy” (Brumbaugh, 1981, p. 13). For Thales, the factor that was the glue keeping all things together was water. His contention that water was the primary substance of nature may appear to be “primitive” thinking, but it was a real innovation in critical thinking given the period in which Thales lived. He developed and applied a rudimentary inductive-scientific method whereby he observed the environment, analyzed what he saw, and attempted to formulate conclusions from this process of inquiry. In so doing, he was able to make assertions about the state of nature (the “general”) by observing his surroundings (by examining the “specific”), and this system was a precursor to the rules of logic more thoroughly developed by Aristotle two hundred years later. Although Thales made a number of important contributions in the natural sciences (e.g., he’s been noted as the father of Greek astronomy and he produced five important theorems used in geometry), it was his method of inquiry that was novel. He was the first person to try to *systematically* explain the natural world by the use of *reason*, rather than by referring to the supernatural as the explanation.

In an attempt to answer Thales’ original question about the nature of all things, Pythagoras of Samos (569–475 B.C.) “held that all things are numbers” (Brumbaugh, 1981, p. 30) and that the world we observe is the product of rational numerical harmony (Mendelson, 2000). Pythagoras developed many of our most important philosophical and mathematical concepts, the most famous of which was the Pythagorean theorem — the square of the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides.<sup>4</sup> Although these discoveries were important, it was the Pythagorean notion that mathematics could be used to explain states of nature that was new. In fact, Pythagoras’ search for “form” (*eidos*) in all things by the use of mathematics is held by some to be the beginning of the *formalist* philosophical tradition. This branch of philosophy holds that formal (mathematical and logical) statements have no real meaning but that their symbols have a “form” that is useful for the rational inquiry into epistemological and ethical questions.

The “reasoned” or “rational” (both words have their roots in the Latin word *ratio*) approach to discovery eventually found its way to

<sup>4</sup>He also developed the idea of “perfect numbers” or numbers that are the sum of their divisors. For instance, 6 is the first perfect number because  $6 = 1 + 2 + 3$ , the latter three numbers being the divisors of 6.

other parts of Greek life. Hippocrates (460–377 B.C.), a priest of the Greek god of healing (Asclepius) and the father of medicine, would typically attempt to ascertain the source of a person's ailment by analyzing the patient's dreams. Initially Hippocrates and his colleagues would use this information to try to determine which evil spirits were in possession of the patient, and then they would chant to try to rid the patient of their demons, and thus their pain. Over the course of time Hippocrates and his followers became aware of the newly discovered methods of reasoning and began to apply them to their trade. This led to the discovery that many illnesses previously thought to be caused by evil spirits were actually caused by factors under one's control (e.g., inadequate nutrition). Thus, through observation and the use of reason, superstition eventually gave way to the use of what we now know as medicine.

This newly discovered method of reasoning also found its way into other intellectual endeavors, and resulted in breakthroughs in other fields (e.g., astronomy, architecture, and sculpture). In sculpture, Polykleitos created the contrapposto pose,<sup>5</sup> which exhibited a relaxed and balanced position. He came to this pose as a result of his search for a *rational* norm for the structure of the ideal human figure. The rational method of inquiry also found its way to the Greek populace by being incorporated into the tragedies performed in theaters such as Dionysus (Rauh, no date). For instance, the playwright Sophocles' (495–406 B.C.) tragic hero Oedipus, in his search for truth, was investigative, continually examining and questioning, and he would often make inferences from the evidence he found.<sup>6</sup> One contemporary Greek historian notes, "Oedipus' method of investigation is that of the critical spirit of the age which he represents" (Knox, 1966, p. 117). These examples demonstrate how reason or rationality was beginning to take root as a way of understanding nature and the human sphere.

Some of these early philosophers were traveling teachers who came to be known as "Sophists" (from the Greek "*Sophia*"). The Sophists were men who taught students (for a fee) the arts of oratory and rhetoric.<sup>7</sup> They differed from early Greek philosophers in that they thought that

<sup>5</sup> A balanced but asymmetrical stance in which the figure is positioned with most of its weight on one leg.

<sup>6</sup> The actual Greek words used by Sophocles have very precise investigative connotations: "skopein" which means "to contemplate or examine"; "historein" means "to question or inquire"; "tekmairesthai" means "to judge or to infer from evidence" (Knox, 1966, p. 117).

<sup>7</sup> According to Plato (in the *Sophist*), they seemed more concerned with teaching their students how to succeed in *any* argument, and in obtaining payment for teaching these skills.

there was too much attention paid to the natural world and not enough concentration on human affairs. They were early “instrumentalists” in that they believed the skills of rhetoric were “the means” by which their students could achieve specified “ends”, the most important of which was thought to be success in Athenian life. Their most important contribution, however, might be that they challenged the traditions of fifth century Athens by the use of rhetoric, and in so doing created an environment that “helped to degrade the influence of myth and superstition and provoke philosophers to a more exact examination of human nature and behavior” (Brumbaugh, 1981, p. 114).<sup>8</sup> Brumbaugh also notes that the Sophists also “redirected the attention of philosophers from the world as observed by man to man as its observer. They began to see that philosophy had implications for everyday social and political practice, and that its pursuit of truth might come into collision with tradition or political expediency” (1981, p. 124). We will see below that the latter observation was truly prophetic.

#### ATHENIAN PHILOSOPHY

Socrates’ (469–399 B.C.) focus was on the “human self” and an answer to the question “What am I?” Thus, Greek philosophers in his time “were confronted with the new problem of reconciling natural science *and* human values within a single system of reality” (Brumbaugh, 1981, p. 123, emphasis added). To do this, Socrates used reasoned inquiry as a means of trying to discover the truth about matters of human values by asking questions (*elenchus*) that were designed to demonstrate the contradictions in one’s argument. This method ultimately gave rise to what we know as the “dialectic,” a system of reasoning in which the search or pursuit of the truth (not necessarily the *discovery* of the truth) is conducted by the exchange of logical arguments. The dialectic mode of inquiry, of which Socrates was a master, is often times denoted the “Socratic method,” and it is probably one of Socrates’ greatest contributions to science and philosophy.

Focusing on the human sphere, Socrates was also interested in how ethical inquiry could establish justice as one of the cardinal human virtues, noting that these virtues are “states of the soul” (Brown, 2003). In Socratic thought the soul or spirit of living things distinguishes them

<sup>8</sup> They also made practical contributions to Greek society by introducing the adversarial system of law and by applying formal logic to the study of law.



from nonliving things, and different living things have different souls. For instance, all living things have a *spirited* or *nutritive* soul, which governs bodily functions like health and growth. Animals and humans are different than plants, however, because the former have an *appetitive* soul, which governs their movement and impulse. However, the really important distinction for the development of rational thought was that humans differ from animals by virtue of the fact that they have a *rational* soul (or spirit) that governs human thought and the ability to reason. Thus, it is the presence of the rational soul that provides us with our humanness<sup>9</sup> and by using rational methods of inquiry, Socrates thought that using mind and soul one could discover truth and goodness, and therefore personal happiness (an early “utilitarian” view).

Importantly, Socrates insisted that we must “not be content with popular prejudice or accepted opinion, but must ‘follow the argument where it leads.’ Reason must be used both to analyze our beliefs and concepts and to subject them to critical scrutiny: ‘the unexamined life is not worth living’” (Cottingham, 1984, p. 3). Cottingham also reminds us that Socrates’ famous slogan about the unexamined life was no idle boast: He went to his death in 399 B.C. “rather than give up his commitment to critical inquiry and the independent exercise of reason” (p. 3).

Because Socrates did not put many of his thoughts to paper, in his early *Dialogues*, his student Plato (427–347 B.C.) laid out the ideas of his mentor. In later years Plato’s writings apparently reflect his own ideas, and much of the conceptual grounding for a more developed concept of rationality. Plato’s “account of the nature and objects of true philosophical knowledge was so influential that he can in many respects be called the father of rationalism” (Cottingham, 1984, p. 13).

Arguably the most important concept developed by Plato was his theory of Forms (or Ideas). This theory was both an epistemological (theory of knowledge) and an ontological (theory of being) thesis, and it is at the roots of much of the formalism underlying the theory of rationality. Regarding Plato’s theory of knowledge, Plato helped us to understand the differences between beliefs and knowledge, the former being important in preference formation, and the latter important in the search for truth.<sup>10</sup> Beliefs, Plato thought, “never possess their properties

<sup>9</sup> Aristotle sees rationality as our *telos*: in his view, everything exists for a purpose, and the purpose of human life is to develop and exercise our rational soul.

<sup>10</sup> As we discuss below, there continues to be much discussion (and some experimentation) about the role of beliefs, their relation to preferences, and their importance in rational choice theory.

in an absolute and unqualified way” (Cottingham, 1984, p. 15) rather they are always subject to revision and qualification. Regarding the difference between beliefs and knowledge, Plato thought there was big difference between believing something is the case and knowing something is the case. “Knowledge is linked to truth: if someone qualifies as knowing a proposition then this implies that the proposition is true; beliefs, on the other hand, can be, and often are, false” (Cottingham, 1984, p. 14). However, Plato thought that even when a belief is true does not qualify it as knowledge. Knowledge involves “giving some account which justifies or gives grounds for the belief, or explains *why* it is true (Cottingham, 1984, p. 14; emphasis in original). Thus, with Plato’s thoughts we see the investigation into causal mechanisms and the beginning of epistemology.

Owing to Wein (1998), Plato also held that it was rational for individuals to pursue their own interests, and that in fact, rationality *requires* individuals to act in their own interests. This element of self-interest is a very important part of later conceptions of rationality, and a fundamental tenet of theories of rational behavior. Regarding self-interest, rationality, and morality, Wein suggests that Plato thought there was no contradiction between rationality and morality, and that the pursuit of one’s (actual) self interest “never conflicts with the demands of morality” (Wein, 1998, no page).<sup>11</sup>

Aristotle’s (384–322 B.C.) “role in the development of rationalist thought is a complicated one” (Cottingham, 1984, p. 13). His foundational work was in trying to describe and explain what causes change (the *aitia* or “responsible factor”). He described the “Four Causes” of change as: 1) the material cause, that is, the matter *out of which* a thing is made; 2) the formal cause or the pattern, model, or structure *into which* a thing is made; 3) the efficient cause or the means *by which* a thing comes into existence; 4) the final (*telos*) cause is the goal, that is, the purpose or *reason for which* something is made (Adler, 1978), and it was the *telos* that Aristotle thought was the most important cause of a thing. These Four Causes were a “theory of human nature which made rationality the defining characteristic of man” (Cottingham, 1984, p. 3) and this inquiry into causation became foundational for the development of rationality and scientific thought until the nineteenth century.

Aristotle held that to “understand” or to “know” required an inquiry into causation, and his philosophy was *teleological* in that everything

<sup>11</sup> For more on the difference between actual and perceived self-interest see Wein, 1998.

was done to achieve some end or final cause or purpose. This focus on the “ends” becomes very important when others delve into the logical structure of the “means-ends” relationship. They also relied on Aristotle’s foundational work in what he called “analytics,” or what we know as “logic.” Aristotle demonstrated that it was the task of the philosopher not only to analyze through the use of logic, but also to examine the principles of the *process* of discovery. An especially important development in logic was his “principle of non-contradiction” that states: “the same person cannot at the same time hold the same to be and not to be.” This principle has often been held up as the origin of all axioms, the foundation of all syllogistic (deductive) analysis, and the ultimate grounding of all scientific knowledge (see Cottingham, 1984 or Kraut, 2003, for more on Aristotle’s writings).

Explorations into the life of the individual and in the ways knowledge was constructed continued during the Hellenistic period (approximately 300 to 50 B.C.) that directly followed the Athenian period. Even though many other important developments took place over the ensuing centuries, we have chosen to “fast-forward” to the Early Modern Period (17th and 18th centuries) because it was in this era that very important advances in rationality and epistemology emerged, and it is during this time that the discipline we know as economics began to take shape. We must always keep in mind, however, that advances in the development of reasoned thought “did not spring out of nothing” (Cottingham, 1984, p. 13); rather the ancient Greeks and their successors laid the foundations for later developments in rational thought and advances in philosophy.

#### THE EARLY MODERN PERIOD AND THE 18TH CENTURY ENLIGHTENMENT

During the Early Modern Period (1501–1750), philosophers addressing the nature, origin, and scope of epistemology basically fell into two general camps, empiricists and rationalists (Markie, 2004). Empiricism (from the Greek *empeiria* or “experience”) is a thesis about nature and the origins of human knowledge that (essentially) claims “all human knowledge derives ultimately from sensory experience” (Cottingham, 1984, p. 6). For instance, John Locke (1632–1704), one of the famous “British empiricists” of the Scottish Enlightenment<sup>12</sup>

<sup>12</sup> As an aside, it was John Locke’s belief that labor’s contribution to the value of finished goods was the most important factor (more so than land and other natural resources) and this concept was the foundation of David Ricardo and Karl Marx’s labor theory of value.

thought the mind of a person was simply a *tabula rasa* or “blank tablet” until experience imprints knowledge on it. Unlike empiricists, rationalists thought “by the light of *reason* we can, independently of experience, come to know certain important and substantive truths about reality, about the nature of the human mind and about the nature of the universe and what it contains” (Cottingham, 1984, p. 7, emphasis added). So we see that empiricists maintained that all knowledge of the world comes from experience, and the rationalists maintained that some concepts, knowledge, or truths are known independent of experience (are “innate”) or can be ascertained by the application of reason.<sup>13</sup> Descartes (1596 to 1650), the father of modern philosophy (Cottingham, 1984), inventor of the Cartesian coordinate system, and author of the famous epigram, “I think, therefore, I am” was a rationalist. He believed that rationality was a necessary condition for experience, and was therefore “prior” to experience. Descartes saw rationality as the foundation for all inquiries into the workings of the world and the relationship between the mind and the body (known as the “mind-body” problem in philosophy). As was the case in his inquiries into mathematics and science, his philosophical approach was to “demolish everything completely and start again right from the foundations” and in so doing he questioned all that had come before him. Thus, he paved the way for the great philosophers of the Enlightenment, and was seen as “the pivotal figure in the transition from classical to modern philosophy” (Cottingham, 1984, p. 36).

There were further distinctions within the rationalist and empiricist camps. Concept rationalists believed that humans have *concepts* that are independent of experience (innate concepts). Leibniz (1646–1716), the inventor of differential and integral calculus, was a concept rationalist who thought that reasoning could be reduced to a system of thought like calculus, and that calculations could be used to understand the workings of the world and of the “human self.” On the other hand, concept empiricists (such as Locke and David Hume) denied the existence of innate concepts, and held that all concepts were dependent on one’s experience. In particular, Locke used newborn children as an example that concepts were not innate. In *An Essay Concerning Human Understanding*, he stated, “they get no more, nor other, than what experience, and the observation of things that come in their way, furnish them

<sup>13</sup> Regarding empiricists, Francis Bacon (1561–1626) observed that empiricists are like ants, they collect and put to use, but rationalists, like spiders, “spin threads out of themselves” (*Cogitata et Visa*, 1607, p. 616).

with.”<sup>14</sup> Although there appears to have been two very distinct camps of thought during this period, as is typically the case there was “a considerable degree of overlap” between empiricists and rationalists (Cottingham, 1984, p. 8), which is probably equally true today.

As noted above, John Locke was one of the three famous “British Empiricists,” the other two being David Hume (1711–1776) and George Berkeley (1685–1753). We will delve into Hume’s writings on philosophy and economic thinking because he had a profound influence on his close friend Adam Smith, who developed many ideas instrumental to the general theory of rational behavior. Hume also significantly influenced Immanuel Kant, who credited Hume with waking him from his “dogmatic slumbers” and motivating Kant to develop an alternative to instrumental rationality.

In *Treatise of Human Nature* (1738) Hume questioned whether it was reason or passion that was the “dominant force in human life” (Morris, 2001, no page). He argued that human behavior and morality were consequences of our passions, which are internal thoughts and not subject to empirical verification. This notion of passions being neither reasonable nor unreasonable is important because it is Hume’s belief that it is our passions that ultimately motivate our behavior. What was rather unique in Hume’s thinking was that he thought both passion and reason were important aspects of human nature, but neither fully explained human nature. It seemed to make sense to him that a theory of nature that integrates *both* passion and reason would be appropriate. So we see how the integration of philosophical ideas was an important part of Humean thinking, and he used his ideas to describe and explain how social institutions and government policies worked, and how pleasure and pain motivated individuals. His inquiries into the theory of motivation became foundational to the branch of philosophy known as utilitarianism, the fathers of which were Hume’s contemporaries Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873). Even though most scholars ascribe utilitarianism to Bentham and Mill, the former noted that Hume’s writings were so influential on his own theorizing that he “felt as if scales had fallen from [his] eyes” and he “learned to see that utility was the test and measure of all virtue.” In our discussion of consumer and rational choice theory below, we will demonstrate the central importance of utilitarianism.<sup>15</sup>

<sup>14</sup> To add a further distinction, judgment rationalists hold that *some* of knowledge is innate, but judgment empiricists deny this claim.

<sup>15</sup> For a more complete treatment of Hume’s work see MacNabb, 1951.

“It would be hard to argue that the standard theory of rational choice owes much to” Immanuel Kant (1724–1804), but “from a philosophical point of view, Kant’s conception of rationality is the most prominent alternative” (Sugden, 1991, p. 755) to instrumental rationality, whose chief proponent was Hume. Kant did not disagree with Hume’s idea that reason was the “slave” of passion, as long as the objective was to *explain* human action. However, Kant differed with Hume about understanding the underlying *causes* of action. Kant thought humans were autonomous and capable of “forming beliefs and of reaching conclusions that are not determined for us by outside causes” (such as Hume’s “passion”).

Kant described two forms of rationality: the hypothetical imperative (if you want to achieve a specific goal, choose the best course of action to do so) and the categorical imperative, a non-instrumental approach in which a particular course of action *must* be followed because of its rightness, and regardless of a person’s desires or passions. Kant’s categorical imperative holds that “reason alone can be a motive for action of the will” (Sugden, 1991, p. 756) and that by using reason, independent actors will arrive (without any logical inconsistency)<sup>16</sup> at a set of laws that are universal. Thus, Kant’s notion of self-governing reason in individuals is the intellectual basis for the idea that each person is possessed of equal worth and deserving of equal respect (Johnson, 2004). His idea that moral principles should be universal was influential in the thinking of contemporary philosophers such as John Rawls, whose “veil of ignorance” is a formalization of the idea that justice should be universalisable (Sugden, 1991).

Hume’s thinking on economics and moral philosophy greatly influenced his dear friend Adam Smith (1723–1790) and many of Hume’s concepts can be found in *The Wealth of Nations* (1776), Smith’s seminal work. In *The Wealth of Nations* Smith laid out his ideas about how individual self-interest, and the workings of the “invisible hand” could lead to desirable social outcomes. Regarding self-interest, Smith noted, “[i]t is not from the benevolence of the butcher, the brewer, or the baker, that we can expect our dinner, but from their regard to their own interest.” This idea of self-interest is one of the cornerstones of the theory of rational behavior and the economic theory of consumer choice.

Although some observers feel Smith’s work was narrowly focused

<sup>16</sup>See Sugden, 1991, pages 756 and 757 for an example from game theory about the role of reason and desire in making choices.

on self-interest, this is not the case. Smith also wrote extensively on ethics, theology, and benevolence. On the latter, one of Smith's most influential pieces was *The Theory of Moral Sentiments* (1759), in which he stated, "[h]ow selfish soever man may be supposed, there are evidently some principles in his nature which interest him in the fortune of others and render their happiness necessary to him though he derives nothing from it except the pleasure of seeing it." This is evidence of the fact that Smith not only was interested in the role of self-interest, but also helped to develop the foundations upon which philosophers could theorize about the rationality of benevolence.

During Smith's time some philosophers held that the law and/or the sovereign determined ethical standards, whereas scholars like Smith thought that people are *born* with a moral sense, that is, morality is innate. However, in addition Smith felt that humans are endowed with what he called "sympathy,"<sup>17</sup> and it is the combination of these two sentiments that "ensure that human beings can and do live together in orderly and beneficial social organizations" (Butler, 2001). This "doctrine of sympathy," in which individuals are thought to have an innate ability to identify with the situation of other individuals, was thought to be the glue that held societies together. This is important to note because Smith believed a sound theory of economics must take account not only of the way in which rationality and self-interest operated, but also about how non-commercial interaction (like sympathy) can hold societies together. So we see that it was Smith's theorizing about morality that provides the ethical, philosophical, psychological, and methodological framework used in *The Wealth of Nations* (Morris, 2001).

Many ideas that may be considered contemporary in nature actually have their roots in Smith's thinking. For example, he believed that individuals who used public works should pay in proportion to their use of these public goods. This notion is the basis of the "benefit principle of taxation," a concept used increasingly by organizations and governments. As an example from higher education, think of the growth of user fees in institutions of higher education, the rationale for these being "he who benefits pays." Also, for those of us who think school vouchers and school choice are contemporary concepts, Smith wrote extensively about alternative forms of school finance and organization such as these two hundred years ago! The theorizing of Hume and Smith (particularly

<sup>17</sup> Smith's "sympathy" is best understood as communication between individuals through which the sentiments of one person are influenced by those of another. Smith also felt that it was sympathy that facilitates moral judgment in people (Morris, 2001).

Smith), also provided the conceptual rationale for many economic theories to follow, particularly those developed by David Ricardo and John Stuart Mill a generation later (The Concise Encyclopedia of Economics, 2004). As testimony to the breadth and staying power of many of Smith's theories, his ideas have influenced twentieth century economists such as John Maynard Keynes (the father of Keynesian economics) and members of the "Chicago School" of economics, the most famous of which is (arguably) Milton Friedman.

#### ADVANCES IN REASONED THOUGHT IN THE TWENTIETH CENTURY

A number of twentieth century philosophers have made significant contributions in the development of rational thought and in advances in our scientific methods of inquiry. One such philosopher was Karl Popper (1902–1994), whose work on the conceptual foundations of theory testing led to important advances in the development of scientific methods like rational choice theory (Turner, 2000). In contrast to the positivists of his time who believed in the power of empirical verification through inductive methods, Popper argued that what made theories scientific was their falsifiability. This philosophy, called *falsificationism* or *critical rationalism*, claimed that theorists should focus on falsifying propositions rather than trying to validate them, because one needs only a single negative instance to refute a theory, whereas validating all possible propositions is impossible.

Central to Popper's critical-rational approach was that humans could never know anything for certain, a decidedly Socratic philosophy. Popper used this approach to attack a number of well-known twentieth century ideas, including scientific socialism as advocated by Karl Marx, and the psychoanalytic tradition of Sigmund Freud. Poppers critical method is one that continues to have "important consequences for the way we approach the theory of knowledge and critical debate in general" (Turner, 2000, no page).

The concept of rational behavior was a central theme behind Ayn Rand's (1905–1982) philosophy of objectivism, a mode of thinking based on rational individualism and one that holds that all human knowledge is based on reason (1964; 1990). This philosophy holds that reality is something that is absolute and not subject to interpretation, and that capitalism is the optimal economic system for transactions to occur among individuals. She argues that for this system to work, individuals must act in their self-interest. What makes Rand's use of rationality



particularly compelling is her assertion that the pursuit of self-interest is justified on moral as well as economic grounds. She was (perhaps) one of the first philosophers to argue that it was the *moral* purpose of one's life to act in ways that would maximize their happiness, another utilitarian idea. This theme can be seen not only in her nonfiction works, but also in her novels including *Atlas Shrugged* (1957) and *The Fountainhead* (1943).

In *The Methodology of Positive Economics* (1953), Milton Friedman (1912– ) lays out his position that can best be described as “an instrumentalist’s argument for instrumentalism” (Boland, 1979, p. 509). Friedman believes the objective of scientific inquiry is to understand the causal mechanisms underlying observable phenomena, and that the instrument used to better understand these mechanisms is empirical investigation. The main tenet of his approach is that the value of a theory can be determined by how well it predicts current and future behavior and phenomena. He disagreed with some of the scholars of the early to mid twentieth century (notably Lionel Robbins and his followers) who held that the significance of a theory is the direct result of the realism of the assumptions underlying that theory (Boland, 1979). In contrast, Friedman developed the “the irrelevance of assumptions thesis,” in which he states, “[t]he relevant question to ask about ‘assumptions’ of theory is not whether they are descriptively ‘realistic,’ for they never are, but whether they are sufficiently good approximations for the purpose at hand” (Friedman, 1953, p. 31). His purpose at hand is not only the search for causal mechanisms, but also to use theory as an instrument of policy making.

Another of Friedman’s ideas presented in his 1953 article is the “as-if” theory of explanation. In defense of the idea that individuals are rational, Friedman does not ask that we believe that people behave according to all the precepts of a formal model of rational behavior. Rather, he thinks we should evaluate the predictions made from such a model when individuals are thought to behave *as if* they *act* rationally. Using the metaphor of pool (billiards) playing, he notes that expert pool players do not consult all the laws of Newtonian physics before lining up a pool shot, even though the success or failure of their shot is in many ways dictated by these laws. Rather, successful pool players act “as if” they were using these laws, otherwise they would not be successful! His point here is: criticisms against a model’s complex set of assumptions are irrelevant; it is the outcome that matters. In fact, he argues that if the assumptions of a theory *are* unrealistic they may be *more*

desirable because of their parsimony; very complex theories may not be useful precisely because they are so complicated.

Few writings in the contemporary history of economic thought have generated as much discussion as Friedman's *Methodology* piece. For instance, Hausman (1992) takes aim at Friedman's logic that the criterion of good theory is valid and meaningful predictions. Even though Hausman finds Friedman's "a tempting and persuasive argument" (p. 218), he nonetheless thinks Friedman's logical argument is faulty (see Hausman, 1992, pp. 218–219). Others have criticized Friedman's focus on prediction as being "a form of naïve and misguided empiricism" (Rotwein, 1959, p. 555). Others still (Bear and Orr, 1967) agree with *some* of Friedman's contentions (e.g., the "as if" principle) but criticize other aspects of his methodology (e.g., the realism of assumptions discussion). According to Boland, the most celebrated criticism of Friedman's methodology was presented by Paul Samuelson, who dubbed Friedman's methodology the "F-twist" (the "F" standing for "Friedman"; see Wong, 1973, for a discussion). Samuelson used a rather clever logical device to attack this theory: he used Friedman's own principles in an attempt to undermine Friedman's methodology (see Samuelson, 1963, for details). Whether he did so successfully is still being debated.

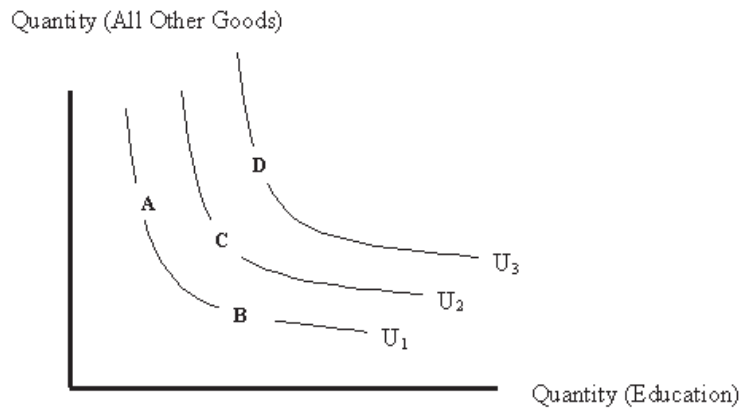
The criticisms of Friedman have also spurred defenses (Boland, 1979) and the recasting of his positions (Musgrave, 1981). For instance, Boland (1979) notes that most critics do not attack Friedman's instrumentalist foundation (for an exception see Caldwell, 1980). Boland thinks this is because instrumentalism "presents certain obstacles to every critic. When instrumentalists argue by offering a long series of reasons (like Friedman did), each of which is sufficient for their conclusions, it puts the entire onus on the critic to refute each an every reason" (Boland, 1976, p. 521). Musgrave (1981) recasts the realism of assumptions argument by noting that assumptions *are* often unrealistic, but that what is really important is the *extent* to which they are unrealistic and the *implications* this has for discovery. Musgrave categorizes assumptions into three types, each with different implications for a theory's usefulness. The "negligibility assumption" is a type of assumption that does not matter much because it has a negligible effect on the phenomena under consideration. "Domain assumptions" are related to the conditions under which the theory will apply. If the conditions no longer exist (or never existed), then the assumption is irrelevant and the theory is not applicable. Assumptions that are known to be false, but their inclusion in a theory will further scientific exploration or theory building, are known as "heuristic assumptions."

Like the scholars who preceded him, Musgrave's reworking of Friedman's ideas is in the tradition of critical thinking originally developed by the Ionians, refined by the Athenian philosophers, and extended by modern day thinkers. This process of reasoned debate has served man well, leading to advances in epistemology and the philosophical concepts underlying theories of individual choice, like those discussed below.

### THE RATIONAL BEHAVIOR OF CONSUMERS

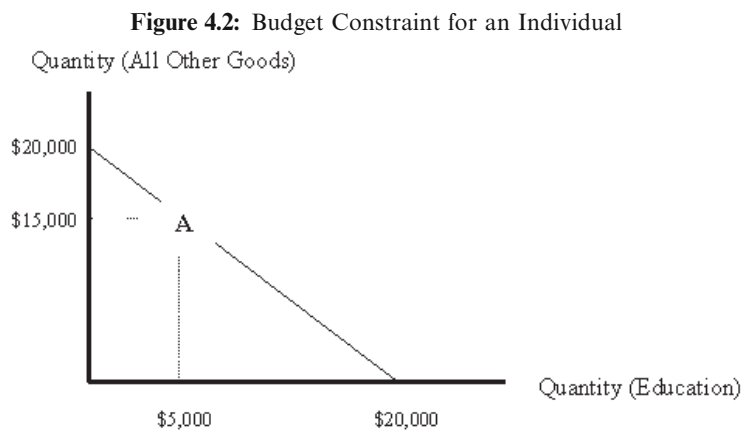
We now turn to a discussion of how economists use rationality to understand consumer behavior. One of the main objectives of microeconomics is to explain the behavior of individuals, and in particular how their behavior might change when they are confronted with changing circumstances. Consumer behavior, for example, addresses how individuals make decisions regarding what goods and services to buy. There are three parts to this analysis: (1) the preferences of the consumer, (2) the constraints faced by the consumer, and (3) the goal/objective of the consumer. We will explain each of these in turn and then show the connection to rational behavior.

Economists use the notion of utility to represent the preferences of consumers. As applied to consumer preference theory, utility is defined as the amount of satisfaction that a person receives from consuming a particular good or service. This requires that individuals can make subjective estimates of the utility that they would receive from different goods and services that they might consume. It is important to understand that utility theory does not presume that each good or service has a fixed worth or value for all consumers. Rather, the utility of a good or service can and will vary from person to person. Likewise, utility is an ordinal rather than a cardinal measure, meaning that the level of utility for each consumer represents the relative and not absolute value to the person. Shepsle and Bonchek (1997) argue that the formation of preferences takes into account an individual's religious values, moral precepts, ideological dispositions, altruistic impulses, and sense of common destiny with family, clan, tribe, ethnic group, or other forms of community. These preferences may change over time as individuals revise their beliefs about the state of the world, as they learn by experience, and as the environments in which they operate change. All of these factors may lead individuals to reevaluate the choices they make, or the instruments they use to help them make choices. It is understood that as experience allows individuals to accumulate additional information, their beliefs

**Figure 4.1:** Illustration of Indifference Curves for an Individual

become more established, they revise their preferences and opinions less frequently, and in doing so they eliminate a lot of uncertainty about their preferences and the subsequent choices they make. However, an important point is that economists take preferences as given and do not delve into how they are formed or why they differ across individuals.

As demonstrated above, economists posit that when choosing between different combinations of goods and services, individuals can estimate the utility that they would receive from different combinations of these goods, and that they can rank these combinations in order of preference based on these estimates. It is not required that consumers *formally* make such calculations, nor that they assign the same values to goods/services, but rather that they act in a way that is consistent with their own preferences. An indifference curve is often used by economists to describe all of the combinations of two goods or services that yield the same level of total utility to an individual. Figure 4.1 depicts three possible indifference curves for a person who must choose how to allocate her income between education (X-axis) and all other goods (Y-axis). The first curve, labeled “ $U_1$ ” shows all of the combinations of education and all other goods that give her a level of satisfaction represented by  $U_1$ . She is assumed to be just as satisfied with, or indifferent between, any two points along this curve, such as points A and B. The curve to the right of  $U_1$  represents all the combinations of education and all other goods that would increase this person’s satisfaction (represented by the utility curve  $U_2$ ). She would prefer any of the points along this curve, such as point C, to any points on the indifference curve labeled  $U_1$ . Similarly, the indifference curve labeled  $U_3$  contains



all of the combinations of education and all other goods associated with this particular satisfaction level, and any point on  $U_3$  is preferred to any point on the other two indifference curves.

Each individual is said to possess an infinite number of such indifference curves for any two goods, with higher levels of satisfaction (and thus preferred combinations) found when moving away from the origin (to the right). In constructing these curves, it is assumed that all goods give a person positive utility, individuals always prefer more of a good (i.e., marginal utility is positive), and that the utility from any good rises at a decreasing rate (known as the “law of diminishing marginal utility”). These three assumptions help give rise to the shape of indifference curves; namely, that they are negatively sloped and are convex to the origin. It is important to emphasize here that for any two goods (such as “education” and “all other goods”), the indifference curves for any two individuals will likely be different. In other words, the economic model of consumer behavior does not presume that all individuals will derive the same utility or satisfaction from a good/service such as education. The model takes these individual preferences as given and does not attempt to determine which are “right” or “wrong” or how they were formed.

The consumption choices that an individual has at their disposal are described by the use of a budget constraint. A budget constraint shows the set of all combinations of two goods or services that a person could choose given their limited resources (typically measured in income). This is depicted in Figure 4.2, where for the sake of illustration the person is assumed to have an income level of \$20,000 to allocate between education and all other goods.

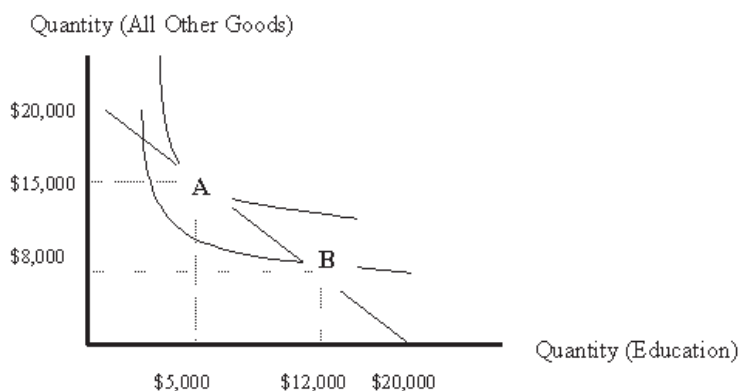
The endpoints (where the budget constraint intersects the X and Y axes) indicate the maximum amounts of education and all other goods that could be purchased with the person's income (in this example it is \$20,000). Point A shows the situation where the person spends \$5,000 on education and \$15,000 on all other goods.

The shape and location of this budget constraint is affected by the person's income level and the prices of the two goods/services being shown in the figure. As the person's income increases, the budget line will shift out to the right and vice-versa. Likewise, if the price of education rises, then the budget line will pivot toward the origin on the axis for education indicating that the same \$20,000 in income could purchase less education than before (this price change would not, however, affect the maximum amount of all other goods that could be consumed). The budget line is a means of introducing scarce resources into the discussion of consumer behavior. Without such limitations, a consumer would make decisions that would enable them to reach as high an indifference curve as possible. The budget constraint, appropriately named, represents the quantities of the two goods that the person is able to consume given limited resources, but this constraint tells us nothing about which of the possible choices is preferred by the individual.

By combining an individual's preferences (indifference curves) with their opportunities (budget constraints), we can begin to understand what economists mean by the phrase "rational behavior." The economist's model of optimal individual behavior argues that a rational individual would choose the consumption bundle that yields the highest level of utility given his or her budget. This is reflected in Figure 4.3.

As represented by point A in Figure 4.3, the optimal choice for the individual would be to spend \$5,000 on education and \$15,000 on all other goods. At this point, the individual is maximizing his or her utility subject to the budget constraint of \$20,000. Note that at point B, the individual is also spending all of his/her money on education and all other goods, but is on a lower indifference curve. Therefore, the individual could increase his or her utility (i.e., become happier) by spending less on education and more on all other goods. Given this information, the person would be rational in choosing combinations of these goods that move them to the optimum at point A.

Accordingly, the definition of rationality holds that if given the choice, the person would attempt to act in a way that would maximize his or her utility subject to the resource or budget constraint. It is very important to note that the consumer is acting in a way that would

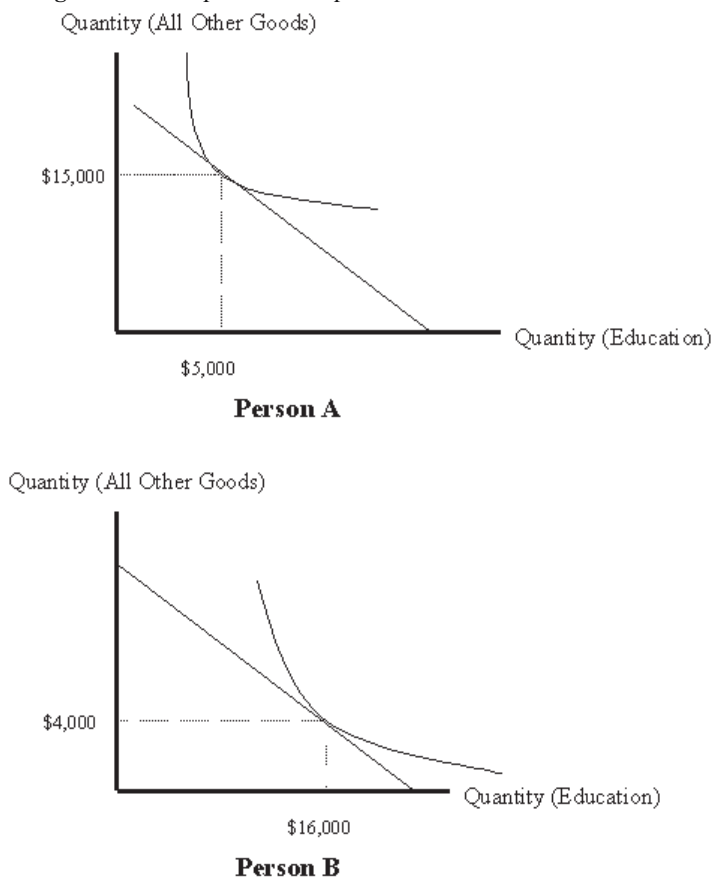
**Figure 4.3:** Examples of Equilibrium

maximize his or her utility, and the utility obtained from education and all other goods is *unique* to each person. Since the utility of any given good or service, such as education, can vary across individuals, we may observe two people making very different consumption choices and yet both could be acting in a rational manner. This is illustrated in Figure 4.4, where two individuals (A and B) have the same income level (as represented by their budget constraints) and are faced with the same choice: how to allocate their income between education and all other goods. Person A's preferences are such that he or she derives relatively little utility from education (their indifference curve is positioned closer to the "All Other Goods" axis), and accordingly might choose to spend \$5,000 on education and \$15,000 on all other goods. In contrast, Person B obtains considerably more satisfaction from education and thus would be inclined to spend \$16,000 on education and \$4,000 on all other goods.

Which of these two people is acting in a "rational" manner according to economists? The answer is both. In each instance, the person is using whatever information they have at their disposal and choosing the consumption bundle that would maximize their own utility. The fact that we observe the two individuals making different decisions about how much education to consume does *not* imply that one is rational and the other isn't rational. The key for evaluating rationality is whether or not the individual is acting in a manner that is consistent with his or her preferences. As noted by Hirshleifer (1985), "Rationality is an *instrumental* concept. In light of one's goals (preferences), if the means chosen (actions) are appropriate the individual is rational; if not, irrational" (p. 59).

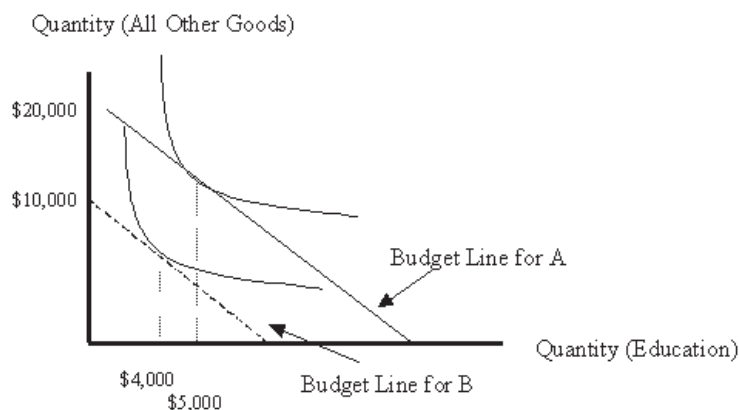
This also raises the issue about what can — and cannot — be

**Figure 4.4:** Comparison of Optimal Choice for Two Individuals



inferred regarding rational behavior through observation of individuals. Typically, all that is observed in data are the final consumption choices made by individuals. In this example, we would observe Person A spending \$5,000 on education and Person B spending \$16,000 on education. As noted above, this tells us nothing about whether Person A or B is acting rationally. A further complication is that if these two consumers face different budget constraints, it may also affect their final consumption choices. For example, differences in income levels would lead to shifts in the budget lines. This is depicted in Figure 4.5, where Person A has \$20,000 to allocate between education and all other goods (solid line) while Person B only has \$10,000 to allocate (dashed line). Otherwise, let both consumers have the same set of relative preferences for education versus all other goods, and hence the same indifference



**Figure 4.5:** Example of Different Consumption Choices Due to Different Budget Lines

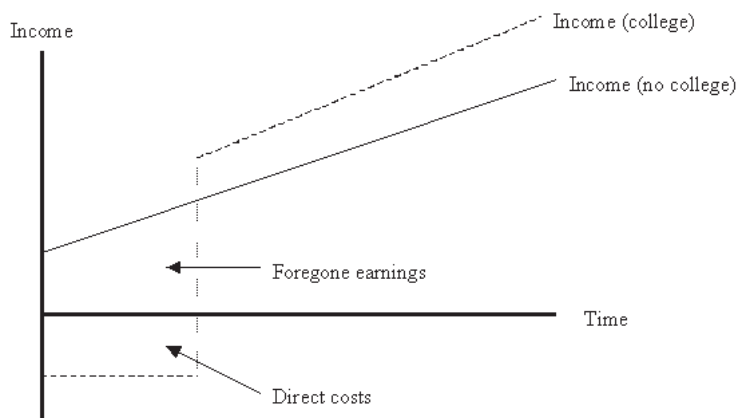
curves. Even when both are acting rationally, we might observe Person A spending more money than Person B on education (\$5,000 versus \$4,000 in this example). Similarly, the two individuals may face different prices for education if they are attending different colleges (e.g., a public versus a private college) and/or they may have received different levels of financial aid so their net prices of attendance are different. If these factors are not controlled for by the researcher, then misleading inferences could be drawn regarding their preferences.

### THE RATIONAL BEHAVIOR OF STUDENTS

Economists have used the model of human capital to explain how individuals make decisions regarding the amount of education to acquire. Human capital can be thought of as the collective skills and attributes that enable individuals to become more productive in the workplace. This human capital is either endowed at birth or acquired through training and education; hence the connection between human capital and education is referred to by economists as an investment in human capital. There is a substantial body of literature discussing the theoretical predictions of student choice (see, for example, Radner and Miller, 1975; Kohn, Manski, and Mundel, 1976; Chapman, 1979; Venti and Wise, 1982; 1983; Young and Reyes, 1987; Hossler, Braxton, and Coopersmith, 1989; Paulsen, 1990; Hossler, Schmit, and Vesper, 1999; St. John, Asker, and Hu, 2001; Toutkoushian, 2001; DesJardins, Ahlburg, and McCall, forthcoming).

According to the human capital model, students will first identify

**Figure 4.6:** Depiction of Investment in Human Capital



the different educational choices that are feasible for them (it does not assume they evaluate all possible alternatives). The model focuses on the benefits and costs to individuals of acquiring education. On the benefit side, the individual making the investment in education may expect that doing so would lead to higher future incomes. The costs would include direct costs of education (e.g., tuition, fees, and books) as well as the opportunity costs of education (e.g., foregone earnings) that the person has to give up in order to acquire more education. This is depicted in Figure 4.6 where the solid line shows the future income stream that the individual would expect if she did not pursue a college degree. The dashed line shows the future income stream that she would expect if she did attend college. Note that for the first few years, her income is negative because she probably is not working full-time and is also incurring direct costs of education.

Mathematically, a rational person is often described as being one who calculates the present value of the future streams of net benefits from going to college and not going to college which can be depicted by:

$$PV(\text{college}) = Y_0^C + \frac{(Y_1^C - E_1)}{(1+r)} + \frac{(Y_2^C - E_2)}{(1+r)^2} + \dots + \frac{Y_T^C}{(1+r)^T} \quad (1)$$

$$PV(\text{no college}) = Y_0^{NC} + \frac{Y_1^{NC}}{(1+r)} + \frac{Y_2^{NC}}{(1+r)^2} + \dots + \frac{Y_T^{NC}}{(1+r)^T} \quad (2)$$

where  $Y_t^C$  is the income in year  $t$  for college graduate,  $Y_t^{NC}$  is the income

in year  $t$  for individuals who do not go to college,  $r$  is the annual rate of inflation, and  $E_t$  represents the direct educational expenses in year  $t$ .

It is tempting, but erroneous, to conclude that if the present value of going to college exceeds the present value of not going to college, then the rational person would always opt to go to college (and vice-versa). This rather rigid description of student behavior has naturally led to objections about the validity of the net present value approach for explaining why students decide to pursue a postsecondary education. First, students may not have accurate information about the future income streams from going to college and not going to college. Second, students may not be able to properly calculate the costs of acquiring a college education. For example, students may not include foregone earnings (typically the largest indirect cost) in their estimates of the total cost of attendance. Finally, as written the model assumes that students only consider the net income differential when making decisions about whether or not to go to college, yet we know there are many non-pecuniary reasons why students decide whether or not to attend college.

This model has been extended to study how students choose among postsecondary institutions by allowing college-bound students to make separate calculations of the present value of net benefits from different postsecondary options. Following this line of reasoning one step further, one might infer that the model implies that students make their college choice solely on the basis of net expected benefits and choose the institution with the highest value. The concerns raised above, however, also apply here. For example, some students may have very poor information regarding the future income streams that they might expect from successfully completing their education at different institutions.

These concerns, however, are largely due to misunderstandings regarding what economic models really imply about individual behavior and are not evidence against the use of rationality in examining student choice. While having inaccurate or incomplete information may affect a student's decision, the decision would still be rational provided that it was based on a reasoned reaction to the information available to them at the time that they made the decision. Thus, it is not necessary that a student have perfect information regarding the future income streams from different institutions in order to make a rational decision. All that is required is that the person be able to form estimates of these income streams and act in a manner that is consistent with their calculations and preferences.

Perhaps the most important oversight in the above discussion of student choice is that economic models actually posit that individuals

make postsecondary decisions based on the *utility* that they would receive from different schooling options, and not simply the net financial benefits. While the utility would certainly be influenced by the net expected monetary benefits from attending each institution, it would also take into account the perceived non-pecuniary benefits of each choice and the satisfaction that students receive from these (e.g., enjoyment of sports programs and student life activities, the beauty of the campus, the proximity to home).

We provide the following example to help illustrate the importance of utility in school choice, and how rationality relates to student choice. Suppose that Adam is a junior in high school, and he has narrowed his college choices down to the University of Minnesota (*m*), Harvard (*h*), and Stanford (*s*). His parents, who are both economists, provide Adam with information on the cost of attending each institution, and the expected earnings that he could receive if he were graduated from each institution. After reviewing this information, Adam announces that he prefers the University of Minnesota when compared to Harvard, and Harvard when compared to Stanford. His preference ordering is therefore represented symbolically as  $m P_A h$ . He also notes that he would rather attend Minnesota than Stanford. Symbolically we can depict the relationship among Adam's preferences by the following: " $m P_A h$ " (or  $m > h$  in some venues) indicates that Adam prefers (depicted by  $P_A$ ) Minnesota to Harvard. If Adam was indifferent between Minnesota and Harvard, then we could depict this relationship by writing " $m I_A h$ ". Thus, we see that  $P_A$  is indicative of Adam's "strict preference" relation and  $I_A$  is indicative of his "indifference relation." The three possible college choices (or "outcomes") discussed above are called alternatives, and rational choice theorists presume that Adam has the capacity to estimate the utility that he would receive from each option, and then make statements such as "I prefer Minnesota to Harvard" or "I prefer Harvard to Stanford."

There are a number of properties that must be true about preference and indifference relations in order for one's decision to accord with the principles of rationality. Property 1, known as the "comparability" or "completeness" property, states that alternatives are said to be comparable in terms of preference (and the preference relation complete) if, for any two possible alternatives, either  $m P_A h$ ,  $h P_A m$ , or  $m I_A h$ . In English, Adam either prefers Minnesota to Harvard, or Harvard to Minnesota, or he is indifferent between these two options.

Property 2, known as the "transitivity" property states that strict preference relations are transitive if for any three possible alternatives ( $m, h, s$ ), if  $m P_A h$  and  $h P_A s$ , then  $m P_A s$ . In other words, if Adam prefers

Minnesota to Harvard, and Harvard to Stanford, then he must prefer Minnesota to Stanford. Likewise, but often forgotten in discussions about transitivity, an indifference relation is transitive if  $m I_A h$  and  $h I_A s$ , then  $m I_A s$ . Putting strict preference and indifference together, we get Adam's "weak" preference relation (denoted by  $R_A$ ) where  $m R_A h$  means that Adam either strictly prefers Minnesota to Harvard, or is indifferent between these options. That is Minnesota is at least as good as Harvard according to Adam's preferences.<sup>18</sup> If Adam's preferences satisfy the comparability and transitivity properties, then he is said to possess a "preference ordering" and the *rational* choice would be the alternative at the top of his preference ordering. Preferences that permit rational choices to be made are, in effect, "ordering principles" that are person specific, permit comparisons a pair at a time, and they are internally consistent.

What if Adam strictly preferred Minnesota to Harvard, and Harvard to Stanford, but Stanford to Minnesota? (The ordering denoted as:  $m P_A h$ ,  $h P_A s$ ,  $s P_A m$ ). This is an example of the comparability property being satisfied but Adam violating the transitivity principle when comparing his alternatives. This could happen because different criteria could be used to compare different pairs of alternatives. For instance, maybe Adam prefers Minnesota to Harvard because he is interested in Chemical Engineering and Minnesota has the number one ranked program in this area. When Harvard is compared to Stanford, he chooses Harvard because he likes Boston and would rather live in Boston than in California. However, he prefers Stanford to Minnesota if the evaluation is made on the basis of weather. In a case like this it is not possible to order all three alternatives in terms of preferences because he is not using the same approach to calculate the utilities of each option.

Economists do not delve into how Adam arrived at his preferences or whether they are right or wrong; to them, what really matters from an analytic perspective is that Adam can form preferences according to these assumptions and that his final choice is logically related to his preferences. That is, if Adam is given the opportunity to choose among Minnesota, Harvard, and Stanford then we say that his choice is rational if it is consistent with his individual preferences. Suppose that another high school junior, Kevin, is also considering the same three institutions. After reviewing the same data that Adam examined on the cost of

<sup>18</sup>As one may note, we could use Boolean operators in this discussion with  $P$  being equivalent to " $>$ " and  $I$  being the same as " $=$ ", and  $R$  defined in terms of " $> =$ ".

attendance and future benefits from each school, he performs his own utility calculations and concludes that he would prefer Stanford to Harvard, Harvard to Minnesota, and thus Stanford to Minnesota. Even though his choice is different from Adam's when faced with the same costs and benefits, it is also rational according to its usage in economics provided that he would receive the highest utility from attending Stanford. Thus, "a choice is rational if the object chosen is at least as good as any other available object according to the chooser's preferences. Put differently but equivalently, an object is a rational choice if no other available object is better according to the chooser's preferences" (Shepsle and Bonchek, 1997, p. 25).

A further complication regarding student choice arises when uncertainty is introduced into the decision making process. This requires that we become more precise about beliefs, their role in the shaping of preferences, and how students respond to uncertainty (for more on the role of beliefs see Lucas, 1987). A belief is "a probability statement relating the effectiveness of a specific action (or instrument) for various outcomes" (Shepsle and Bonchek, 1997, p. 32). Individuals who know for a fact that an action will lead to a particular outcome are operating under conditions of *certainty*. For instance, Adam may be (nearly) certain that he will be able to graduate from the University of Minnesota if he is admitted, but is less confident that he will be able to graduate from either Harvard or Stanford. Persons who are not so confident that they know what will happen when a particular action is taken, but have some sense of the possibilities and their likelihoods (if I flip a fair coin there is a 50/50 chance it will come up heads), are dealing under conditions that involve *uncertainty* or *risk* (also see Bueno de Mesquita and Bennett, 2002).

To be more specific, consider the following example. Grace is considering three college alternatives: the University of Minnesota, St. Cloud State University, and Anoka Community College (she wants to remain near home so she is only considering colleges in Minnesota). She prefers Minnesota to St. Cloud, and St. Cloud to Anoka Community College, and if her being successful in each of these colleges were equally probable, she would therefore choose to attend the University of Minnesota since she believes that a degree from the University of Minnesota would enable her to earn more per year than would be true if she was graduated from either St. Cloud or Anoka Community College. In this situation, the rational choice for Grace is pretty apparent: choose the course of action (or instrument) that leads to the top-ranked alternative.

However, if her probability of succeeding in each of these institutions varies, this would make her choice process more complex. Suppose she also knows that based on her ACT scores and grades in high school, her chance of being graduated from the University of Minnesota is lower than her chances of being graduated from either St. Cloud or Anoka Community College. When beliefs about action-outcome relationships become complex, such as in Grace's case, the principle of rational behavior requires some additional explanation. One way to deal with this complexity is to assign probabilities to the different possible outcomes from each decision, and attach these weights to the possible outcomes from each college choice.<sup>19</sup> In Grace's case, her father is a college professor who knows each of the institutions she is interested in attending, and he can help her assign some reasonable probabilities of being graduated from each conditional on attendance. Because her father also knows that there may be lifetime earnings differences depending on whether a student goes to college and the quality of the degree granting institution, he can also help her assign relative valuations of these values.<sup>20</sup> When we merge the information about her utility valuations with those of her chances of being admitted and successful in college, we end up with probabilistic statements of her expected utility, defined by:

$$EU(\text{College}_i) = [\text{Pr}(\text{Success College}_i) * U(\text{College}_i)] \\ + [1 - \text{Pr}(\text{Success College}_i) * U(\text{College})] \quad (3)$$

where  $EU(\cdot)$  is the expected utility of each alternative,  $\text{Pr}(\cdot)$  is the probability that a student will be graduated from  $\text{College}_i$ ,  $U(\text{College}_i)$  is the utility or value placed on being graduated from each college, and  $U(\text{No College})$  is the utility derived if the student is not graduated from the college that she attends.

The "principle of expected utility" (owing to Savage, 1954, and others) provides us with one method for assigning a single number to each choice, which then allows us to rank their relative valuations. "Rationality requires a chooser to select the action that *maximizes expected utility*" (Shepsle and Bonchek, 1997, p. 34; emphasis in original). In our

<sup>19</sup> This example is adapted from a case used by Branislav Slantchev in his International Relations class at the University of California-San Diego.

<sup>20</sup> Whether there are "sheepskin" effects, that is, significantly higher returns to more selective schools, is a topic on which there is considerable disagreement (see Jaeger and Page, 1996, or Eide, Brewer, and Ehrenberg, 1998, for a discussion of this issue and recent empirical evidence).

**Table 4.1:** Example of Grace's Expected Utility of College Choice

	College Alternatives		
	University of Minnesota	St. Cloud State University	Anoka Community College
Probability of success	0.20	0.80	0.95
Income if successful	\$100,000	\$50,000	\$25,000
Utility if successful	5,000	2,500	1,250
Probability of failure	0.80	0.20	0.05
Income if unsuccessful	\$20,000	\$20,000	\$20,000
Utility if unsuccessful	1,000	1,000	1,000
Expected Utility	1,800	2,200	1,238

example, Grace's expected utility for each choice is the weighted average of the utilities for each alternative based on their associated probabilities. Table 4.1 provides an illustration of how Grace might assign utility values to the future income estimates and probabilities of being graduated from each institution ("successful") provided by her father. Based on this information, Grace's expected utility is highest at St. Cloud State University, even though she would expect to earn less with a degree from St. Cloud State University than she would with a degree from the University of Minnesota. Assuming that Grace was risk neutral, she would find it optimal to attend St. Cloud State University. Grace would be irrational, however, if she were risk neutral and chose to attend the University of Minnesota based on the information in Table 4.1.

In the example provided above, Grace was able to assign reasonable probabilities to the alternatives under consideration due to having better information. However, even when an individual has poor information about the true probabilities or likelihoods of alternatives, they often have some subjective hunches (judgmental or subjective probabilities) about likelihoods that they can associate with various alternatives. There are a variety of techniques to help individuals determine their subjective probabilities (see Behn and Vaupel, 1982, a very valuable resource for applying decision theory to problem solving), or to assign weights to their preferences. The latter is common in evaluation research that employs multiattribute utility technology (known as MAUT; see Edwards and Newman, 1982 for details). The key for assessing rational behavior is whether students use the probabilities that they have formed to make decisions, and not whether or not their probabilities are accurate.



**Table 4.2:** Example of Emily's Expected Utility of College Choice

	College Alternatives		
	University of Minnesota	St. Cloud State University	Anoka Community College
Probability of success	0.40	0.85	0.99
Income if successful	\$100,000	\$50,000	\$25,000
Utility if successful	8,000	4,500	2,000
Probability of failure	0.60	0.15	0.01
Income if unsuccessful	\$20,000	\$20,000	\$20,000
Utility if unsuccessful	1,500	1,500	1,500
Expected Utility	4,100	4,050	1,995

An interesting question might be: At what probability of success would it become rational for Grace to choose the University of Minnesota? This can be determined by rearranging the terms from equation (3) as:

$$\Pr(\text{Minnesota}) \geq \frac{EU(\text{St.Cloud}) - U(\text{NoCollege})}{U(\text{MN}) - U(\text{NoCollege})} \quad (4)$$

Substituting the respective values from Table 4.1, we get:

$$.30 = \frac{2,200 - 1,000}{5,000 - 1,000}$$

Thus, if Grace thought her chances of being successful at Minnesota were greater than or equal to 30 percent, it would be rational for her to choose the University of Minnesota. Suppose that Emily had the same information as Grace on the incomes that she could earn upon being graduated from each institution, but has higher perceived probabilities of succeeding at each institution (Table 4.2). She could also form her own expected utilities based on this information (note that the utility from each choice may be different for Emily than for Grace), and in this example Emily would be rational in selecting the University of Minnesota, assuming that she is risk-neutral.

We now turn to how a student's preference for risk might affect their decision about where to attend college. Individuals are likely to vary not only in the utilities that they attach to alternatives, but also with regard to their tolerance for risk. In Table 4.2, for example, while Emily's expected utility from attending the University of Minnesota is higher than her expected utility from attending St. Cloud State University,

there is a greater chance that she will not be able to graduate from the University of Minnesota. In this situation, a risk-averse student (one who seeks to avoid risk) may rationally decide to attend St. Cloud State University even though  $EU(\text{Minnesota}) > EU(\text{St. Cloud State University})$ . Returning to Table 4.1, if Grace were a risk seeker, she might be willing to attend the University of Minnesota even though  $EU(\text{Minnesota}) < EU(\text{St. Cloud State University})$  because there is a chance that she could be successful at Minnesota and receive more income, and hence utility, upon completion of her degree. A person's tolerance for risk is similar to a person's preferences in that they vary across individuals, neither can be observed by outsiders, and differences across individuals can make the decisions of one or both appear to be inconsistent with the notion of rational behavior.

Thus, we see how utility theory can be useful for understanding how students make decisions, even when these decisions appear to be quite complex. There will be some people who would choose not to go to college even though they would expect, on average, to benefit financially from going to college. This would be the case for those individuals who would receive less utility from working in a college-trained occupation than they would in a particular job that does not require a college degree, even though the income may be less. As difficult as it may be for some observers to understand, there are some individuals who dislike the notion of going to college. These individuals may have a very high preference for other types of work rather than the work they could pursue with a college degree. Likewise, they may derive relatively little utility from studying and going to class, and conclude that they would be happier spending this time in other ways. Accordingly, the model suggests that forcing these individuals to go to college would result in moving them to a lower indifference curve and lowering their utility or level of well being.

This discussion points out that it is extremely difficult for analysts to draw conclusions about the rationality of students based on their actions. All that we typically observe of students is whether or not they go to college, and where they choose to enroll. Since we do not observe their individual preferences for education, their tolerances for risk, or the estimates that they made regarding the net expected benefits of each option, we cannot infer from *their actions alone* whether or not they were behaving in a rational manner. Likewise, since the expected earnings streams will vary across individuals depending on their specific attributes such as ability, two people may make very different decisions even when faced with seemingly similar choices. Students may be

observed enrolling in institutions where the net cost of attendance is higher than seemingly comparable alternatives, or choosing less-reputable institutions when they have been admitted to more selective institutions. These observations do not, however, demonstrate that these students are behaving irrationally.

While the rationality assumption is an important part of the economic model of student choice, economists devote little attention to the appropriateness of this assumption. In contrast, the primary focus of economists who study student choice is on how the postsecondary decisions made by students are affected by factors such as price, family income, and student ability (see Venti and Wise, 1982; 1983; Fuller, Manski, and Wise, 1982; Rouse, 1994). The student choice model is not used to determine if the choices made by students are rational per se, but rather to understand how decisions change when one or more of the factors affecting choice change. As noted by Silberberg (1978), economics focuses on marginal analysis in that it is concerned with explaining how equilibrium might change as compared to how the equilibrium was reached. To see this, economists might express the utility that the  $i$ -th student receives from the  $j$ -th schooling option as follows:

$$U(\text{college})_{ij} = U(F_j, F_i, S_i) \quad (5)$$

where  $F_j$  = finance-related factors for the  $j$ -th institution, such as tuition and fees, financial aid, and the estimated value from choosing this option;  $F_i$  = finance-related factors for the  $i$ -th student including family income and wealth; and  $S_i$  = non-financial student characteristics that can influence the monetary return to education, including student ability, parental characteristics, and choice of major. This elaboration draws from the theory of human capital in that attending college is a form of investment in human capital, which then affects the return on investment in education.

The focus of the analysis then becomes whether student choice is influenced by changes in factors such as tuition rates, financial aid, family income, educational attainment of parents, and student ability. An economist might assert that as the price of attending the  $j$ -th alternative rises, the net monetary return and hence utility from choosing this option would decrease; [i.e.,  $\partial U(m)_{ij}/\partial F_j < 0$ ]. Accordingly, this would reduce the overall utility for the  $j$ -th option for students and possibly lead some of them to no longer choose this option. It is recognized that a wide range of financial and non-financial factors influence a student's

choice regarding postsecondary education. Again, the goal is not to explain how all students make their initial postsecondary education choices, or whether or not these choices are rational, but rather how are student decisions influenced by changes in specific factors thought to be related to student choice.

### RANDOM UTILITY MODEL OF STUDENT CHOICE

As we described above, the uncertainty of outcomes and a person's willingness to accept risk can complicate the issue when trying to understand the rationality of individual choice. Some economists have expanded the notions described above using what is known as a "random utility model" to explain choice under uncertainty. This model of rational choice has been used to study issues as disparate as developing measurement scales for comparative judgment (Thurstone, 1927), mathematical psychology (Marschak, DeGroot, and Becker, 1963), transportation-mode choices (McFadden, 1976), recreation demand (Parsons, 2000), family labor supply (van Soest, 1995), and brand choice (Abe, 1998). Random utility models have also been used to study student choice (DesJardins, Ahlburg, and McCall, forthcoming), with the underlying assumption being that students have a set of schooling and non-schooling alternatives and they will attempt to maximize their net utility when making their schooling decisions.

Following Manski (1977) and Hanemann (1984), there are two main components of the random utility model: a deterministic component and a stochastic component. The latter accounts for the fact that the researcher has incomplete information (is uncertain) about the utility function of students. The uncertainty can arise from a number of sources: unobserved individual attributes, unobserved attributes of the alternatives available, measurement errors, and the use of instrumental or proxy variables (Manski, 1977). Thus, "the distinguishing feature of this theoretical perspective is that a potential stochastic nature is attributed to individual utility" (Corstjens and Gautschi, 1983, p. 23). Applied to the study of college choice this model can be formally represented by:

$$U_a^i = D_a^i + \varepsilon_a^i \quad (6)$$

where  $U_a^i$  is the utility that student  $i$  derives from choosing college  $a$ ;  $D_a^i$  is the deterministic component and  $\varepsilon_a^i$  represents the stochastic or uncertainty described above. This can be transformed into a probabilistic

statement:

$$P_C^i(a) = P[U_a^i = \max_{b \in C} U_b^i] \quad (7)$$

indicating the probability that student  $i$  will choose alternative  $a$  given choice set  $C$  (which may contain labor market and alternative schooling options), and  $U_b^i$  represents the utilities derived from the alternatives to college  $a$ .

As noted above, although a student's utility is strictly unobservable, we infer utility maximization by observing the actual choices made. When a student chooses institution  $a$  over other alternatives (represented by  $b$ ), we infer that  $a$  provided the student with greater net benefits (utility) than entering the labor market or attending any other institution. We model the latent or unobserved component using  $y^*$ , defined as the difference between the utility derived from choosing college  $a$  versus choosing a competing alternative. Formally this is denoted as:

$$y^* = U_a^i - U_b^i \quad (8)$$

such that

$$y^* = \beta'x + \varepsilon \quad (9)$$

where  $\beta'x$  is known as the "index function" and  $\varepsilon$  is an error term assumed to be logistically distributed. The link between the observable choice ( $y$ ) and the latent variable ( $y^*$ ) is "made with a simple measurement equation" (Long and Freese, 2001, p. 100) where:

$$y = 1 \quad \text{if } y^* > 0 \quad (\text{i.e., } U_a^i > U_b^i) \quad (10)$$

$$y = 0 \quad \text{if } y^* \leq 0 \quad (\text{i.e., } U_a^i \leq U_b^i) \quad (11)$$

In the context of student choice, this framework provides the theoretical basis for the probability that a student makes a particular choice (denoted by  $y = 1$ ), like whether to send their scores on standardized tests to a particular institution, whether to apply to an institution, and conditional on admission, whether to enroll in an institution (see Manski, 1977 for details on the random utility model and Greene, 1993, for the econometric specification of latent variable models and their assumptions).

DesJardins, Ahlburg, and McCall (forthcoming), used Manski's rational utility model as the conceptual basis of their study that focused on how specific factors influence the sequential nature of the application, admission, aid determination, and enrollment process. Based on rational choice theory and the theory of expectations, their *a priori* hypothesis was that students make calculative college choice decisions based on

their expectations. For instance, they hypothesized that students tend to apply to institutions where they have a reasonable expectation of being admitted and that students form their choice set based (at least in part) on their expectations of financial aid. They posited that if the latter is the case, then changes in aid packaging not only directly affects enrollments, but could also have an impact on application behavior. The authors also posit that modeling the structure of application, admission, aid determination, and enrollment may provide insights into the sequential nature of the student choice process, thereby adding to our understanding of the structure of student choice.

The authors found that aid expectations have powerful non-linear and asymmetric effects on enrollment *and* application propensities, and that disappointing students with regard to their aid expectations can have serious negative effects on enrollment. These findings represent a contribution to the student choice literature because although some researchers have argued that students act on the basis of their expectations (Fuller, Manski, and Wise, 1982; Curs and Singell, 2002) few (if any) investigators have developed a model capable of testing these assumptions and some analyst even think that it is impossible to do so (see Glenn, 2004).

DesJardins *et al.* not only believe their conceptually based integrated model improves “our collective understanding of the interactions among application, admission, financial aid expectations, and enrollment behavior” (p. 32), they also claim that the simulations they conducted based on the statistical results of their study “demonstrate that these models also have practical utility in that they can be used to simulate the impacts of changes in the factors that affect the structure of college choice” (p. 32).

#### ADDITIONAL CRITIQUES OF RATIONALITY

Criticisms of rational choice theory in the economics literature as well as other fields are numerous. One particular criticism is that the models in utilitarianism and classical economics assume individuals are too materialistic and hedonistic, and not concerned enough with the moral and emotional aspects of life.<sup>21</sup> This criticism has been addressed over the years by demonstrating that symbolic qualities, such as a

<sup>21</sup> For critiques of rational choice theory (and responses to these critiques) from a sociological perspective see Coleman and Fararo, 1992 or Colman, 2003). For the same from a political science perspective see Green and Shapiro, 1994 or Friedman, 1996.

person's good name or a company's brand name or good will, have value in the same way that commodities and other material goods do. In contemporary economic thinking this is done by treating these "goods" as scarce, just like other goods, and examining whether individuals "treat decision making in the face of 'scarcity'" (Smelser, 1992, p. 392) in ways that are different than the traditional analysis of scarce goods (see Smelser, 1992, for details). Likewise, there is nothing in the economic view of consumer behavior that would rule out instances where an individual's preferences take into account the well being of others.<sup>22</sup>

Others have argued that there are multiple forms of rationality, and that these should be separated when addressing issues such as student choice. Simon (1947), for example, distinguished among a number of different forms of rationality, including "intended rationality," "subjective rationality," "conscious rationality," "deliberate rationality," and "organizational rationality." Simon's most famous work in this area is his concept of "bounded rationality," a version of rationality in which instead of trying to find the best course of action to achieve one's goals, individuals actually "forego the aspiration to full optimality, and pursue goals through 'satisficing', that is, 'good enough' rules-of-thumb that may be sub-optimal" (Foley, 2003, p. 3) but move the individual toward his desired goal. The reason individuals use rules-of-thumb and other simplifying strategies is because there are limits to their cognitive capacity and therefore their rationality. Thus, Simon's proposition is that individuals' ability to rationalize is "bounded" by their limited cognitive capacity (Simon, 1955) and this limitation can cause problems when social choice is the objective (1978) or in decision making that takes place in business organizations (1979).

In more recent work, Simon also proposed that human behavior might be "procedurally" rational (and this work has been elaborated on by James Buchanan). Under this model the behavior of an individual is thought to be procedurally rational when it "is the outcome of appropriate deliberations" (Simon, 1976, p. 129). This is an important distinction because when "psychologists use the term 'rational,' it is usually procedural rationality they have in mind" (Simon, 1976, p. 129). As we shall see below, a relatively new area of economics incorporates ideas about individual decision-making from psychology (particularly experimental psychology) and other disciplines with traditions in studying rational choice.

<sup>22</sup>For more information on bounded rationality, particularly from an economics perspective, see Conlisk, 1996.

Others, such as Smelser (1992), argue that when it comes to purposive behavior, “the model of rational calculation is psychologically unrealistic” (p. 388). In recent years this critique has gained acceptance because of studies in the emerging field of behavioral economics and in behavioral psychology. Researchers in these fields have discovered that cognitive anomalies emerge under a variety of experimental choice situations. These anomalies are “circumstances in which individuals exhibit surprising departures from rationality” (McFadden, 1999, p. 79). Many of these studies focus on the “cognitive processes underlying the formation of preferences and belief” and the results often indicate that “the axioms of rational choice are often violated consistently by sophisticated as well as naïve respondents, and that violations are often large and highly persistent” (Tversky, 1977; as quoted in McFadden, 1999, p. 79). Much of this research is based on Simon’s theory of bounded rationality (Frank, 1994).

Research in behavioral and experimental economics incorporates many of the traditional assumptions about individual choice behavior, but tests the limits of some of these assumptions (often using traditional econometric methods). For instance, behavioral economists are interested in testing the assumptions about utility maximization, especially whether individuals really maximize expected utility. Much of the research in this field is conducted in laboratory settings in an attempt to ascertain how individuals actually make decisions under a variety of conditions. Behavioral economists also rely heavily on surveys of individuals. For instance, they may want to delve into the beliefs and preferences of individuals in order to better understand how these “primitives” affect decision making (see Simon, 1987, for details).

Another possibility is that some of the decision-making anomalies uncovered are “contextual” such as “framing effects” which occur when “the presentation of information influences how it is processed” and thus effects how decisions are made (McFadden, 1999, p. 84; also see Sugden, 1991 on framing effects; Sen, 1995 for logical antinomies when applying rational choice theory to social choices). Another category of anomalies are known as “reference point effects” such as “asymmetry” that occur when subjects in experiments show risk aversion for gains, risk preferences for losses, and weigh losses more heavily than gains. Applied to student choice, this kind of experiment could help us better understand how individuals interpret changes in tuition and changes in financial aid. That is, are increases in tuition perceived more negatively even when they are accompanied by increases in financial aid?

“Availability effects” are anomalies that arise because of problems



in the “way humans process information to form beliefs” (McFadden, 1999, p. 84). These anomalies are important because they are related to the way individuals estimate outcome probabilities. Another anomaly, known as “superstition,” occurs when individuals are presented with data that contain patterns, but they systematically reject randomness as a possible explanation (patterns can occur from random draws!). “Process effects” have also been discovered where “limits on human computational and information processing ability may lead to the adoption of bounded rational heuristics” that are “different than the process of forming tradeoffs and maximizing utility” typically associated with rational choice (McFadden, 1999, p. 94). Finally there may be “projection effects” — “when an experimenter presents a choice task within a limited context, the subject may interpret the problem within a broader, strategic context” (p. 95). For instance, “in public good valuation surveys, this phenomenon is sometimes called the ‘warm glow’ motivation” (p. 96) for overstating one’s willingness to pay for public goods. That is, individuals may systematically overstate their willingness to pay for public goods because they derive moral satisfaction simply from the act of giving.

Understanding these anomalies and their effects are important advances in the development of how individuals make choices. Although some may argue that these anomalies sound the death knell for rational choice theory, McFadden, who has conducted a considerable amount of research on extensions to and the limits of rational choice theory is not so pessimistic. He notes, if “the cognitive anomalies that do appear in economic behavior arise mostly from perception errors, then much of the conventional apparatus of economic analysis survives, albeit in a form in which history and experience are far more important than is traditionally allowed” (1999, p. 99).<sup>23</sup> Undoubtedly much more research needs to be conducted in this area, and higher education researchers, who have often borrowed concepts from other disciplines, should be looking to behavioral economics for ways in which we can improve our understanding of the complexities of student choice.

## DISCUSSION

Are students rational when making decisions regarding their post-secondary education? Unfortunately, for the many reasons discussed in

<sup>23</sup> For more information on attempts to unify theories from economics and other social sciences see Olson, 1990.

this chapter, it is nearly impossible to tell based only on the observation of the choices that students make. Despite the impression in some quarters that students appear to be irrational, a counterargument is that what might appear to be irrational behavior by an individual may not really be the case. It could be that individuals are acting rationally but our inability to observe their beliefs, preferences, and taste for risk masks this fact. As Coleman (1990) noted, social scientists and other observers need to be careful about “imputing objective interests [i.e., those posited by the theorist] to a person which differ from that person’s interests as he perceives them” (p. 511). Quackenbush (2004) also notes, “[m]any critics of rational choice theory have questioned whether actors are really rational. However, we have demonstrated that these questions are based on misunderstandings of the assumption of instrumental rationality. Rational choice theory is consistent with behavior that is constrained by institutions, cultural influences, or psychological limitations” (pp. 101–102).

And as we have detailed above, this theory of rational choice finds its roots in the development of rational thought that began in ancient Greece and has continued to this day. Developments during the Enlightenment linked philosophy and thinking about political economy, which helped formalize the discipline we now know as economics. More recently, twentieth century philosophers, economists and social scientists made great strides in theory building, and especially important were advances in the scientific method that has dominated social science research. Advances in these areas have contributed to a better understanding of the concept of rationality and its application to how individuals make choices.

We hope our chapter has also contributed to an improved understanding of what rational choice theory implies — and does not imply — about student behavior when making decisions regarding their postsecondary education. Particularly noteworthy is that rationality is always defined relative to each person’s preferences and taste for risk. Rationality does not hold that given like information individuals will make the same decisions, or make decisions that an individual observing the situation would have made. Also, data limitations and limitations in our knowledge of students’ beliefs and preferences make it very difficult, if not impossible, to determine if an action they take is consistent with rational behavior. Another point is that circumstances are constantly changing that may affect a student’s decision, and these may not be observed or properly taken into account by researchers (known as the *ceteris paribus*

problem), thus making inferences about the rationality of behavior problematic. Finally, as demonstrated above, questions often arise about the applicability of strong versions of rationality, particularly when they are applied to social choice and non-cooperative behavior. There is experimental evidence that some of the restrictive assumptions of rationality break down in certain circumstances. Although we have made great gains in our understanding of how individuals choose, there is clearly a need for a better understanding of the limits of rational choice modeling and how it can be improved upon for understanding individual and collective decision-making. In particular, higher education researchers could take a page from behavioral economists and experimental psychologists by learning to apply their methods to study how students make choices. To do so would be consistent with the traditions of the ancient Greeks; to be ever inquiring in our search for answers, to be critical of current conventions, and to strive to improve our understanding so that those who follow will have a solid foundation on which to build.

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## 5. INVESTMENTS IN HUMAN CAPITAL: SOURCES OF VARIATION IN THE RETURN TO COLLEGE QUALITY\*

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### INTRODUCTION

The American higher education system experienced massive expansion and differentiation in the 20th century, especially over the last 40 years. In 2000 there were approximately 4,200 institutions of higher education in the United States and its territories, enrolling about 15.3 million students (National Center for Education Statistics, 2003).<sup>1</sup> The diversity of institutions and educational experiences available to students in this large enterprise is extraordinary, ranging from two-year colleges providing mainly vocational training and preparing students for further education to large research universities offering advanced academic work and research training. The majority of high school graduates in the United States now attend colleges within a year of high school graduation<sup>2</sup> and one of the primary reasons for these growing rates of student

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<sup>1</sup> These institutions included 2,450 four-year colleges (enrolling approximately 9.4 million students) and 1,732 two-year colleges (with about 5.9 million students).

<sup>2</sup> 61.7% of the nation's recent high school graduates attended colleges in 2001 (National Center for Education Statistics, 2003). Mortenson (2003 #132) calculates the college continuation rate of recent high school graduates to have been 65.2% in 2002.

participation in such a diverse enterprise can be attributed to the attractive expected economic payoffs to investments in college education and one's level of educational attainment. Research on the economic returns to students who invest in a college education has consistently demonstrated that substantial economic benefits — particularly in the form of greater earnings — accrue to those individuals who invest in college and advance their level of educational attainment (e.g., Grubb, 1992; Juhn, Murphy, and Pierce, 1993; Kane and Rouse, 1995; Leslie and Brinkman, 1988; Monk-Turner, 1994; Murphy and Welch, 1989; Psacharopoulos 1993; Rupert, Schweitzer, Serverance-Lossin, and Turner, 1996). Additional research has shown that the economic return to investment in college varies according to a student's major field of study, the student's academic performance, demographic characteristics, and other factors (Berger, 1988; James, *et al.*, 1989; Rumberger and Thomas, 1993; Thomas, 2000a, Thomas, 2003).

The increasing differentiation among institutions in the American system of higher education has also led to differentiation in the meaning of *educational attainment* — a construct with a contemporary interpretation that increasingly goes beyond the traditional and simple dichotomy of college graduates versus non-college graduates. In other words, there is now substantial differentiation among college graduates and *college graduates* is no longer a homogenous group, especially because of perceptions of substantial differences in the *college quality*<sup>3</sup> of graduates' alma maters. Many researchers, in one way or another, have made the case that college quality is an element in the formation of human capital and thus has an important effect on the earnings of college graduates. Weisbrod and Karpoff (1968), Reed and Miller (1970), Solmon (1973, 1975), and Wise (1975) were among the first to explore the effect of college quality on graduates' earnings. Behrman and Birdsall (1983) showed that quantity alone is not sufficient to capture the return to education and that quality should be incorporated into the standard Mincerian (1962, 1974) framework for the estimation of earnings functions.<sup>4</sup> Recently, studies by Brewer and his colleagues (Brewer and

<sup>3</sup>Phrases such as *college quality* and *high-quality colleges* may sound ambiguous to some researchers. Some may suggest that other words such as *selectivity* be used. Admittedly, *selectivity* is more concrete and easier to measure, yet *college quality* is certainly more than selectivity. In this chapter, we chose the word *quality* but used it as a relative measure. In many cases, *high-quality colleges* may be interpreted as *colleges with relatively high quality*. In cases where the term *most prestigious* or *elite institutions* is used, it refers to a smaller subset of *high-quality colleges*. Finally, college quality may be interpreted as characteristics of institutions or as characteristics of students. To some extent, these two interpretations are the same.

<sup>4</sup>In the simplest Mincerian frame, the return to education is estimated by  $\ln W =$

Ehrenberg, 1996; Brewer, Eide, and Ehrenberg, 1999; Eide, Brewer, and Ehrenberg, 1998) and Thomas (2000a, 2003) have significantly improved our understanding of the economic effect of college quality.

These studies recognize — either implicitly or explicitly — that the quality of college education, in addition to college education itself, might have a substantial effect on graduates' earnings. Most studies along this line, however, have found that college quality generally has a very small though statistically significant effect on earnings (Mueller, 1988; Solmon and Wachtel, 1975; Thomas, 2000a). A similar conclusion was drawn by Pascarella and Terenzini (1991) in their comprehensive review of the literature on the effect of college quality on earnings.

These empirical results appear to be at odds with decisions made by many students and their families: If college quality has such a small effect on earnings, why are so many more than willing to pay the increasingly large tuition charges at high-quality colleges? Why do so many work so hard to gain admission to high-quality colleges? For example, among *US News and World Report's* 15 highest-rated national liberal arts colleges,<sup>5</sup> the average “sticker price” or stated tuition level was \$18,057 in 1994–1995, with other institutions (including 2,739 four-year institutions) charging about \$5,919 (Ehrenberg, 2000, p. 10). In 2000–2001 the average tuition rate of Ivy League institutions was about \$25,350, while other institutions charged about \$8,000, on average. Despite their extraordinarily high tuition rates, the acceptance rates at these elite institutions are surprisingly low. According to *US News and World Report*, in 2000–2001 the average acceptance rate at the top 15 liberal arts colleges was 35%, and the figure was 18% at Ivy League institutions. The high excess demand for these high-priced seats at prestigious institutions suggests the presence of a larger effect of college

$\beta_0 + \beta_1 X + \beta_2 EDUC + \varepsilon$ , where  $\ln W$  is the logarithm of earnings or hourly wage rate,  $X$  is a set of individual characteristics typically including race, gender, and family background variables, and  $EDUC$  is the quantity of education, usually measured in years of schooling. In this framework,  $\beta_2$  is the return to one additional year of education. More recent research has suggested that quantity alone is not sufficient to capture the return of education (e.g., Behrman and Birdsall, 1983); other dimensions of education such as quality of education have been incorporated into the equation.

<sup>5</sup> In *U.S. News and World Report* rankings, the top 15 liberal arts colleges in 1999 were Amherst, Swarthmore, Williams, Wellesley, Haverford, Pomona, Bowdoin, Middlebury, Carleton, Wesleyan, Davidson, Grinnell, Smith, Washington and Lee, Bryn Mawr, and Claremont McKenna. This group of institutions has remained quite stable over years. In the most recent 2004 edition, only Bryn Mawr fell out of the top 15 (to 17th place) with all the other institutions remaining in the top 15.

quality than has been shown by the corpus of work in this area.<sup>6</sup> Furthermore, the empirical results from previous studies are inconsistent with the disproportionate representation of graduates from high-quality colleges (especially private, elite institutions) among those generally considered to be “most successful” in the United States. National leaders almost without exception received degrees from highly selective private institutions — the Adamases, Roosevelts, Tafts, Kennedys, and Bushes in politics and the Mellons, Rockefellers, and Fords in economic affairs. This evidence is not just anecdotal. In a study investigating the predictors of executive career success, Judge, Cable, Boudreau, and Bretz (1995) found that nearly 1 in every 10 executives was from an Ivy League university, not to mention those from other high-quality institutions. This evidence suggests an enormous impact of high-quality colleges, especially the most prestigious institutions, on social status and power, if not income.<sup>7</sup>

Finally, the results are in conflict with the great benefits associated with attending high-quality colleges that economic theories would suggest. For example, from the perspective of economic theory, the decision to choose high-quality colleges, which often means paying high tuition and fees, is based on a comparison of the financial benefits and costs of such an investment. Considering the substantial tuition difference between high-quality colleges (especially high-quality private colleges) and low-quality ones (especially low-quality public colleges), one would expect significant earnings differences between graduates of these two types of institutions. Human capital theory, a major theory in explaining success in labor markets, also argues for large economic benefits associated with a high-quality college education. The theory posits that the labor market rewards investments individuals make in themselves (e.g., their education or training) and that these investments lead to greater productivity and to higher salaries (G. Becker, 1964; W. Becker, 1992; Schultz, 1960, 1961). High-quality colleges, those usually characterized by more rigorously credentialed and accomplished academic faculty,

<sup>6</sup> Here a high-quality college education is regarded as an investment good rather than a consumption good.

<sup>7</sup> An alternative explanation is that these “successful” individuals would have been successful anyway, regardless of the quality of colleges they attended. Statistically speaking, being “successful” could be due to individual heterogeneity, but not state dependence. The individual heterogeneity can be controlled if it is observable (by the analyst); otherwise, it becomes the well-known problem of selection bias. Both views are acknowledged in subsequent sections.

capable and motivated students, large libraries, well-equipped laboratories, and so on, are able to provide their students with better resources for human capital improvement than are low-quality colleges.

It seems, then, that the empirical evidence is not fully consistent with everyday observations or with the predictions of economic theory. Can these observations and theories be reconciled with the empirical evidence? What role does college quality play in promoting social mobility and perpetuating social stratification in the broader society? We address these two questions in this chapter in the following ways. First, we review the existing research literature on the effect of college quality on earnings of college graduates. Second, we examine the key methodological issues and challenges in studies of the effects of college quality on earnings. Third, we synthesize the theoretical frames that inform research on college quality effects. Fourth, we explore new directions for inquiry based on the study of sources of variation in the effect of college quality on earnings of graduates. Fifth, we present and discuss the results of our own research examining how the effect of college quality on earnings varies according to gender, race, family income, parental education, and major field of study. Sixth, we interpret the results of our own research on college quality effects within the broader context of research on educational attainment in order to examine the conflicting roles of high-quality colleges in both promoting social mobility and perpetuating social stratification in American society. And finally, seventh, we introduce a set of implications of our empirical and theoretical analyses for effective policy development.

#### COLLEGE QUALITY

Generally speaking, the modern literature on the economic effect of college quality began with studies by Weisbrod and Karpoff (1968), Wales (1973), Solmon and Wachtel (1975), and Wise (1975), and recently has undergone a renaissance with works by Behrman, Rosenzweig, and Taubman (1996), Brewer and Ehrenberg (1996), Brewer *et al.* (1999), and Dale and Krueger (1999). Not only were the results of studies of these issues important for academic and theoretical purposes, they were also important to prospective students and their parents who paid a greater share of the increasing costs of higher education, especially at prestigious institutions (Ehrenberg, 2000).

Table 5.1 summarizes 24 previous studies of the effect of college quality on earnings. Although this list is by no means exhaustive, it

**Table 5.1:** Summary of Previous Studies of the Effect of College Quality on Earnings

Study	Data source	College quality measure	Controls	Model	Findings	Notes
*Weisbrod & Karpoff (1968)	7,000 male college graduates at AT&T in 1956	4-fold rating of college by personnel office	Academic performance, years of experience	Annual earnings estimated by OLS	Larger return to more selective college if similar class rank achieved.	
*Reed & Miller (1970)	2,559 male college graduates from CPS supplement in 1967	7-fold ranking based on freshmen aptitude index	Age, major, race, father's occupation, father's education, region, urban HS	Average weekly earnings estimated by OLS	Higher earnings associated with higher rank.	
*Wales (1973)	3,700 white males with at least some college. NBER-Thorndike Air Force pilot trainees in 1943, earnings data in 1969	5-fold classification based on Gourman rating, graduate school rankings	IQ estimate, schooling dummies, religion, age, father's education, marital status, biographical variable (family income, education, and hobbies), occupational dummies	Monthly earnings estimated by OLS	Top fifth college increases earnings substantially. Quality effect varies by education level, but not by ability level.	
*Solmon (1973, 1975)	1,511 white males from NBER-Thorndike data with 1969 earnings, and 1,199 from 1955 earnings	Gourman overall and academic rating, average faculty salary, SAT score, instructional expenditures per FTE students, university income and expenditure, single overall measure in some models	IQ estimate, years of education, experience and experience squared, occupational dummies	Log annual earnings estimated by OLS	All quality measures have positive effect on earnings when entered separately. Average SATs and faculty salary are isolated as independent factors. Effect does not vary with years of college or with ability.	

*Continued*

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
*Solmon & Wachtel (1975)	3,489 white male college attendees in NBER-Thorndike sample as Wales (1973)	8-fold classification based on Carnegie Commission ratings	IQ estimate, years of schooling, years of experience and occupational dummies	Log annual earnings estimated by OLS	Quality has significant effect on earnings. Rate of return also varies with quality. Quality effect does not vary by ability for those who did not attend graduate school.	Quality added separately and interactively with years of schooling.
*Wise (1975)	976 white male college graduates in a single manufacturing firm in 1968	6-fold classification based on Astin's college selectivity index	GPA, rank in class, major, years of experience before firm, average rate of salary increase, SES, indices of job security, leadership, initiative, and supervisor rating	Log monthly earnings estimated by OLS	Rate of salary increase rises with college selectivity, and selectivity effect similar across GPA.	College selectivity permitted only to affect rate of salary increase.
*Wachtel (1976)	1,633 males from NBER-Thorndike sample in 1969, including those with only high school	Expenditures per FTE student at undergraduate and graduate levels	MAT scores, father's education, years of experience and years of schooling, college/graduate school dummies, school expenditures per pupil in high school district	Log annual earnings estimated by OLS	College expenditures per student have significant effects for non-graduate college attendees, but small effects on graduate college attendees.	

Continued



Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
*Griffin & Alexander (1978)	525 male college attendees from ETS 1955 sample, 1970 follow up	Astin's selectivity index	SAT score, high school class rank, GPA, honors, mother's education, father's education and occupation, parental income, household possessions, religion, educational experiences, counseling and orientation, occupational aspirations, academic self image, HS curriculum and math/science courses, major region, urban high school	Annual earnings estimated by OLS	College selectivity positively related to earnings, but effect small.	
*Morgan & Duncan (1979)	881 males and 517 females from 1974 PSID sample of college attendees	Average ACT/SAT scores of entering freshmen, college expenditure per FTE, Coleman prestige ranking	Scores on sentence completion test, years of experience, job tenure, city size, father's occupation and education, amount of college completed, annual hours worked, occupation	Log hourly wages estimated by OLS	Quality measures insignificant for females. For males, only freshman ACT significant. Effect varies by years of college.	Separately by males and females.

Continued

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
Trusheim & Grouse (1981)	4,836 males from Panel Study of Income Dynamics, with some four-year college education	Average SAT/ACT scores of the entering freshmen	Test scores, father's occupation, father and mother's education, number of siblings, dummies for non-south, non-farm, non-foreign upbringing, achievement motivation, education and occupation, weeks worked	Earnings estimated by OLS	College selectivity has a significant impact on middle-aged men's income in a single year, but does not affect further growth in income.	
Mueller (1988)	3,094 male and 3,833 female students from 1971 ACE/UCLA Freshman Survey, with earnings from 1979-80 HERI follow-up survey	Average SAT scores of the entering freshmen	Mother's education, father's education, parental income, HS rank, financial aspiration, concern for financing college, academic ability, academic motivation, confidence, degree aspiration, college control, highest degree, occupational prestige	Recursive structural equation models	Quality could explain only a minute percentage of variance in income above and beyond the controls, but it had a significant indirect impact on earnings.	This study examined the direct, indirect, and non-causal effects of selectivity on earnings for both sexes.
*Kingsion & Smart (1990)	1971 sample in 1980 cooperative Institutional Research Program, 2,213 college attendees with BAs or less	Public/private and selectivity categories based on SAT scores of freshmen	HS grades and class ranking, race, sex, parental income, mother's and father's education, GPA, HS type, occupational aspiration, leadership index, college GPA, science major, dummies	Approximate annual income estimated by OLS	Significantly higher income from higher selectivity college, non-linear effects.	

Continued

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
Karabel & McClelland (1987)	3,144 college attendees from 1973 Occupational Changes in a Generation Survey	7-fold classification based on Astin's selectivity index	Father's education, mother's education, father's occupation, mother's occupation, education level, Duncan SEI of respondents occupation	Log annual earnings estimated by OLS	College quality affects earnings of advantaged students more than disadvantaged students. Aggregate models of the impact of institutional rank are problematic.	
Smart (1988)	3,357 students from 1970 and 1980 Cooperative Institutional Research Program (CIRP) survey	3-fold classification based on SAT/ACT scores, expenditures per student, and tuition	College grades, sex, SES, HS academic record, race, college size, major, highest degree earned, job complexity, organizational size and nature	Income level (a nine-point scale based on actual earnings) estimated by structural equations	College quality has a significant indirect effect only for those in public organizations, but not for those in private organizations.	Earnings are a function of a complex series of events, including students attributes, college types, performance in college, nature of employers, and characteristics of their jobs.
*Fox (1993)	853 college graduates in 1986, HS&B seniors	Dummy for most competitive colleges based on Barron's rating	HS&B verbal and math scores, male and race/ethnicity dummies, family income, HS grades, college major, and private college dummies	Log hourly wage estimated by OLS, simulates net earnings profiles	Premium from attending elite institution higher if private.	

Continued

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
*James <i>et al.</i> (1989)	1,241 (1989) and 1,107 (1993) male college graduates in 1986 from NLS-72	Log instructional/general expenditures per student, average SATs of entering freshmen	SAT, HS rank, HS GPA, college GPA, Public/private dummies, research/Ph.D. dummies, % students part time, % graduate students, % liberal arts majors, own SAT minus average SAT squared, major, race, religion, number of siblings, father's education and occupation, Catholic HS, HS size, months experience, job tenure, weeks worked, marital status, occupation/industry dummies	Log annual earnings estimated by WLS, Fixed effect model with college dummies only	Average SAT has positive effects on earnings, except in models with occupation/industry dummies, expenditure variables insignificant.	Some specifications with an IV for selectivity and expenditures per students.
*Loury & Garman (1995)	2,013 male college attendees from NLS-72 in 1979 or 1986	Median SAT score of college	SAT, GPA, race, weeks worked, rural dummy, parental income, years of college, major dummies	Log weekly earnings by WLS	College quality positively affects earnings for Blacks but not for Whites in full model <sup>1</sup> for college completers with same ability selectivity had very small effect.	Model allows effect of major, GPA, college SAT and years of college to vary by race.

Continued

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
Rumberger & Thomas (1993)	8,021 BA completers from Recent College Graduates (RCG) 1987 Survey	Astin's selectivity score	Sex, race/ethnicity, father's education, mother's education, father's occupation, mother's occupation, college major, GPA, private/public dummy, labor market conditions (including work experience, hours per week, public sector, self-employed, degree requirement, job not related to major)	Log annual earnings estimated by OLS and HLM	College quality affects initial earnings of college graduates, but the effect is small and not consistent for students of different majors.	
Behrman <i>et al.</i> (1996)	8,400 female twins born in Minnesota in 1936–1955	Private, Ph.D. granting, college size, average full professor salary, expenditures per student, total students per faculty	School years, work experience	Log annual earnings estimated by OLS	Higher faculty salary, granting of Ph.D., smaller college size, and private controls have significant positive effects on earnings.	This study used data on female twins to differentiate out common unobserved effects.
Brewer & Ehrenberg (1996)	2,549 college attendees from HS&B 1980 Senior cohort, with 1986 earnings	6-fold classification based on Barron's rating	Female, race, family size, father's education, mother's education, test scores, part-time job, undergraduate/graduate dummies	Log hourly wage estimated in the context of a structural model, correction for selection bias	Attending an elite private college does not necessarily pay off in terms of early earnings, but it increases the probability of graduate school enrollment.	The structural model allows for the correction of self-selection bias.

*Continued*

Table 5.1: (Continued)

Study	Data source	College quality measure	Controls	Model	Findings	Notes
Brewer <i>et al.</i> (1999)	3,062 college attendees from NLS-72 and 2,165 from HS&B Sophomore cohort	6-fold classification based on Barron's rating	Female, race, family size, father's education, mother's education, test scores, part-time job, undergraduate/graduate dummies	Log hourly wage estimated in the context of a structural model, correction for selection bias	Larger premium to attending an elite private institution, smaller premium to attending a middle-rated private institution. Return to elite private college increases for 1980 cohort as compared to 1972 cohort.	It uses longitudinal data to examine the changes of labor market returns across time for a given cohort. The structural model allows for the correction of self-selection bias.
Dale & Krueger (1999)	College and Beyond (C&B) 1976 cohort, with 1995 earnings	Average SAT scores divided by 100	Race/ethnicity, SAT/100, HS top 10%, college athlete, additional applications, undergraduate percentile in class, advanced degree, public/private dummies, liberal arts, average tuition charged	Log annual earnings estimated by OLS, correction for selection bias	Quality does not affect earnings, but tuition is significantly related to earnings.	Correction for selection bias by matching sets of students who were accepted and rejected by the same groups of colleges.

Continued

**Table 5.1: (Continued)**

Study	Data source	College quality measure	Controls	Model	Findings	Notes
Thomas (2000a)	3,832 BA completers from B&B first follow-up in 1994	Average SAT scores of the entering freshmen	Sex, race/ethnicity, first generation BA, parental occupation, GPA, number of other colleges attended, attended community college, college major, labor market characteristics, private institution, college size, urban college	Log annual earnings estimated by HLM	College quality affects initial earnings, but the effect is very small. Effect of private college is also small.	The coefficient of quality college variable is 0.0001.
Thomas (2003)	4,604 BA completers from B&B second follow-up in 1997	Six-fold classification based on Astin's selectivity index and institutional control	Similar as in Thomas (2000a)	Log annual earnings estimated by HLM	Quality confers larger earning advantages compared with Thomas (2000a), both for public and private institutions. Academic performance and major also affect earnings significantly.	

\* Studies with \* are summarized in Brewer *et al.* (1999)

includes most of the published, methodologically rigorous studies. This table includes summaries of twelve studies identified in an earlier review by Brewer, Eide, and Ehrenberg (1999). Almost without exception, studies in Table 5.1 used more or less the same method: Individual  $i$ 's log earnings or hourly wage rate ( $\ln(Y_i)$ ) was modeled as a function of the quality of institution  $j$  he or she actually attended ( $Q_{ij}$ ), demographic characteristics ( $D_i$ ), family background ( $F_i$ ), academic background ( $A_i$ ), job market conditions ( $J_i$ ), and an individual disturbance term ( $\mu_i$ ). In mathematical notation,

$$\ln(Y_i) = \alpha_0 + \alpha_1 Q_{ij} + \alpha_2 D_i + \alpha_3 F_i + \alpha_4 A_i + \alpha_5 J_i + \mu_i \quad (1)$$

Popular measures of college quality include average SAT/ACT scores of entering freshmen (Dale and Krueger, 1999; Griffin and Alexander, 1978; Morgan and Duncan, 1979; Mueller, 1988; Solmon, 1973, 1975; Thomas; 2000a, 2003; Wise, 1975), Gourman ratings (Solmon, 1973, 1975; Wales, 1973), Carnegie Classification (Solmon and Wachtel, 1975), tuition (Smart, 1988), expenditure per FTE student (Morgan and Duncan, 1979; Wachtel, 1976), and Barron's ratings (Brewer and Ehrenberg, 1996; Brewer *et al.*, 1999).

Early research usually used the conventional Ordinary Least Squares (OLS) technique (e.g., Wales, 1973; Weisbrod and Karpoff, 1968). Structural equation models were sometimes employed to examine the direct and indirect effect of college quality on earnings (e.g., Mueller, 1988). Recent studies paid more attention to the econometric problems in the earnings equations such as equation 1. For example, Behrman *et al.* (1996) used data on female twins to control for common unobserved effects, and Brewer and Ehrenberg (1996) and Brewer *et al.* (1999) used structural models to allow for correction for selection bias. Thomas (2000a, 2003) employed a Hierarchical Linear Modeling (HLM) technique to address the complexities inherent in the multi-level structure of the survey data.

On average, these studies indicate that college quality — measured in various ways — has a very small though statistically significant effect on earnings. However, the findings of these studies are not totally unequivocal and a review of the results summarized in Table 5.1 illustrates the variation in results. Some studies, for example, demonstrate substantial economic benefits associated with attending high-quality colleges. Brewer *et al.* (1999) provide an exemplary study with such results. After controlling for gender, race/ethnicity, family size, parents' education, test scores, and part-time job status, they found that students



who attended private elite institutions enjoyed a large salary premium. This finding was echoed by Thomas (2003) who also found substantial economic benefits associated with graduating from high-quality colleges, five years after college graduation. In contrast, other studies have indicated either statistically non-significant or even negative effects of college quality on earnings. For example, Dale and Krueger (1999) found that college quality had either non-significant or negative effects on earnings after controlling for some salient, confounding variables.

#### *Some Key Methodological Influences*

It is important to consider some of the key methodological issues that could contribute to the wide range of findings from previous research on the effect of college quality on earnings. We see three major challenges to accurately modeling economic returns to college: selection bias, operationalization of “quality,” and the time period in which to measure the returns to college.

*Selection Bias.* In simple language, students self select different types of colleges partially based on the expected labor market payoff and many other factors. Thus, the estimated effect of college quality includes not only the true effect of college quality, but also the payoff from the self-selection process. In this sense, selection bias is a model specification error (Heckman, 1979). By definition, individual heterogeneity in observed characteristics is not the source of selection bias. For example, students with higher measured abilities stand a better chance of graduating from high-quality colleges, and those with lower measured abilities are more likely to graduate from low-quality colleges. Controlling for observed characteristics effectively eliminates the bias caused by individual heterogeneity, but not by self selection.

Although correction for selection bias is important in principle and appealing in theory, for a number of reasons, the method is not adopted as the major estimating framework in most studies. First, statistical correction for this bias requires the simultaneous estimation of two equations. In studies of this type, it is very difficult to develop a system of two equations with different sets of independent variables in each. Because most variables are correlated with each other, those in the selection equation tend to enter the usual outcome equation. As a result, the non-linear functional form of the selection term is usually used as the last resort to identify the system, which causes other problems such as multicollinearity. Second, the estimation of the effect of college quality

with selection bias corrected is very sensitive to the specification of the selection equation. Changes in the variables included in the selection equation sometimes alter the results completely. Third, in previous studies on the effect of college quality on graduates' earnings, researchers have found little evidence that correction for selection bias significantly changes the results (Brewer and Ehrenberg, 1996; Brewer et al, 1999).

*Measuring Quality.* Recent work has shown that some of the variance in results across these studies is a function of sensitivity to the measure of college quality being used. Whenever the effect of college quality is discussed, a primary concern of researchers is how to measure college quality. Previous research employs a host of measures of college quality, including the Carnegie Classification system, mean or median SAT score of entering freshmen class, tuition and fees, per FTE educational expenditure, Gourman ratings, and recently Barron's ratings. Many have argued that measures of quality such as those used in the studies cited in this chapter are actually measuring "selectivity" instead of "quality." We suggest, as have others, that selectivity is a key component of institutional quality (Hansmann, 1999; Winston, 1996, 1997; Winston and Zimmerman, 2004; Winston and Yen, 1995). Not only is selectivity highly correlated with other measures of quality such as student/faculty ratios, endowment per student, expenditure per student, etc., but it also affects students' educational and social experiences on campus (Hansmann, 1999). So, while college quality is generally understood to be a multidimensional construct, no consensus has been reached in the literature on how to best operationalize and measure this construct. Nevertheless, most recent studies have relied on some measure of selectivity.

Zhang (2003), in one of the few studies examining this potential sensitivity, shows that the effect of college quality is indeed sensitive to various operationalizations of "quality." His analysis reveals that great variation in the effect of college quality exists across different measures, although the estimated effect of college quality is generally positive and statistically significant regardless of its measure. For example, Zhang (2003) estimates that the earnings advantage of graduating from high-quality institutions (both public and private) is about 20% relative to graduating from low-quality institutions when Barron's ratings are used. However, this figure reduces by half when the mean SAT score is used instead. Because the Carnegie Classification system is based on number of doctoral programs and federal research funds (both criteria emphasize

faculty research and graduate programs more than undergraduate education), Zhang concludes it does not seem to capture the “quality” of undergraduate education well.

Despite the sensitivity of the estimated effect of college quality to its measurement, the general conclusion that it pays to attend high-quality colleges holds (Zhang, 2003). One of our consistent observations is that when a small proportion of institutions are identified as high-quality and the estimated effect is relatively large, the average cost differences between high-quality and low-quality colleges are also large. Similarly, when a relatively large proportion of institutions are tagged as high-quality and the estimated effect is relatively small, the average cost differences between high-quality and low-quality colleges are also small. Perhaps the most intuitive comparison provided by Zhang’s sensitivity analysis is when one employs tuition and fees as a measure of college quality (Smart, 1988 employed this measure in an earlier study). Zhang shows that a \$1,000 increase in tuition and fees annually at private institutions to be associated with \$733 earnings increase annually, and at public institutions the same amount of increase in tuition and fees is associated with a \$570 earnings increase annually. Put in a slightly different way, assuming a four-year average period of college education and no discounting factor, on average it takes less than six years for students from the private institutions and about seven years for students from the public institutions charging higher tuition and fees to break even on the differences in tuition and fees (Zhang, 2003).

*Timing and Earnings Trajectories.* Graduates from colleges of varying quality may have different earnings trajectories over their careers, so comparing earnings differences at the early stage of graduates’ careers may be misleading. Due to the lack of available longitudinal data, most work on economic returns has focused on the returns to college quality at discrete points in time. Most studies can only compare earnings differences at the early stage of graduates’ career because nationally representative longitudinal data on labor market outcomes of distinct cohorts of college graduates are still a recent phenomenon. For example, the B&B: 93/97 has earnings data only four to five years after college graduation. Many studies on this subject examine the 1986 earnings for the well-known NLS-72 cohort, a span of about 10 years since college graduation.<sup>8</sup> However, college quality may have different effects over

<sup>8</sup> It is noteworthy here that the B&B is representative of baccalaureate recipients whereas most surveys such as HSB, NLS-72, and NELS-88 are not.

one's lifetime. That is, if college quality influences earnings trajectories; focusing on one point in time could well be misleading.

Studies such as Brewer *et al.* (1999) have noted a trend of increasing impact of college quality during the early stage of graduates' careers. Yet to date, no systematic consideration of modeling and testing has been given to this issue. This is in large part due to data limitations that prohibit any meaningful combination of the effect of college quality over one's lifetime.

A glimpse into the importance of this consideration is given by Thomas and Zhang (2003). They compare the effect of college quality on graduates' earnings one to two years and four to five years after graduation. Their analysis shows that the earnings gap between graduates from low-quality and high-quality colleges has significantly increased between the two points in time. For example, they show that the wage gap between graduates from high-quality private college and those from low-quality public institutions has more than tripled between 1994 and 1997 (a 22% gap versus a 7% gap). Similarly, the wage gap between graduates from high-quality and low-quality public institutions has increased from about 9% to 20%, suggesting a more than doubled gap in 1997 relative to 1994. Thomas (2003) showed that, on average, earnings of graduates from all types of colleges have grown significantly between these two time periods, but those graduates from high-quality institutions, especially high-quality private colleges, realized the greatest increase in earnings.

Considering that the earnings gap examined by Thomas and Zhang is a relative gap, the increasing earnings dispersion among graduates from colleges of varying quality is indeed an important finding. Given that graduates from low-quality colleges earn less than those from high-quality colleges, it is not surprising that the absolute earnings gap (in actual dollar terms) widens over time, assuming that all graduates share the same growth rate. It is perhaps more than that, however. Thomas and Zhang's analysis shows that the earnings of those from high-quality institutions grow at a faster pace than those from low-quality institutions, resulting in a widening relative gap (in terms of logged earnings) among graduates from colleges of different quality. If earnings partially reflect one's occupational position, this increasing earnings gap could suggest quite different career paths among graduates from colleges of varying quality. While this analysis does not attempt to identify the mechanism through which college quality plays a role in one's career development, it appears that college quality has an influential impact not only on one's initial occupational position but also on one's career path.

College quality may have different effects on earnings over individuals' career spans. Therefore, the relatively small effect of college quality on earnings usually examined at the early stage of graduates' career could be valid but problematic if it is generalized over one's lifetime.

### *Conclusions from the College Quality Literature*

Putting aside those studies with "extreme" results (both strong positive effects and negative effects), most studies suggest that college quality has a statistically significant though generally very small effect on earnings (Pascarella and Terenzini, 1991). For example, a study by Solmon and Wachtel (1975) analyzed a sample of white male college attendees in the 1943 NBER-Thorndike survey, which reported 1969 earnings and found that after controlling for IQ estimates, years of schooling, years of experience, and occupations, college quality, assessed at the mean, had a statistically significant but economically very small effect on earnings: only about an additional 1% of the variance in 1969 earnings above and beyond that accounted for by the control variables. A similar conclusion was reached by Mueller (1988), who confirmed that college quality could explain only a minute percentage of variance in earnings above and beyond the controls. In a more recent study, using a nationally representative sample of 4,061 college graduates in 1992, Thomas (2000a) found that college quality had a small but statistically significant (at a liberal  $\alpha = 0.10$ ) effect on earnings one year after college graduation. Findings of most studies in Table 5.1 belong to the following category: College quality had a small although statistically significant effect on college graduates' earnings.

These empirical results appear to be at odds with the increasing cost gap among colleges of varying quality; neither are they consistent with the disproportionate representation of graduates from high-quality colleges (especially private, elite institutions) among those who were generally considered to be "most successful" in the United States. Apparently, a re-interpretation of the economic data and re-examination of the effect of college quality is warranted. In the remainder of this chapter, we broaden the research on the effects of college quality on earnings by examining the variability in the effect of college quality across an array of factors. Before offering our own empirical demonstration, we consider theoretical frames that might serve as a guide to such analyses.

THEORETICAL FRAMES

What theories might guide the inquiry into these issues? If it has been generally recognized in previous studies that a college education in general and college quality in particular have impacted graduates' economic status, how should we interpret these effects? What theory (or theories) would help us understand the mechanism through which college quality takes effect? Further, in re-interpreting and re-examining the effect of college quality in this chapter, how should one proceed with such an analysis? What theory (or theories) would best guide us through the analysis and help us understand the role of college quality in society?

*Human Capital Theory.* Most studies in this area rely heavily on human capital theory in interpreting the effect of college quality on earnings. Human capital theory views investment in human capital as analogous to investment in physical capital and claims a positive role for education in enhancing one's labor productivity, and therefore, one's income. Intensive economic analysis of human capital began with the work of Theodore Schultz (1960, 1961), Jacob Mincer (1962), and Gary Becker (1964). In most early work, the economic effect of education was assessed merely in terms of quantity or years of schooling. Later, thanks to studies examining the economic effect of educational quality (including those studies listed in Table 5.1), the quality of education became a standard element in what has come to be called the Mincerian (1974) framework for estimating earnings functions.

According to human capital theory, the labor market rewards investments individuals make in themselves (e.g., their education or training) and these investments lead to greater productivity and higher salaries for the individual student investors (see Paulsen [2001] for an insightful account of the evolution of human capital theory). High-quality colleges, which usually possess quality academic faculty, capable and motivated students, large libraries, well-equipped laboratories, and so on, would appear to provide their students with better resources for human capital improvement than low-quality colleges. Thus, most previous studies proceeded with the proposition that college quality may have significant effects on graduates' earnings although the bulk of these studies have only shown a relatively small effect on those earnings.<sup>9</sup>

<sup>9</sup>Human capital theory provides a perspective to interpret the effect of college quality but does not suggest the magnitude of such an effect. However, considering the increasing gap between the costs of a college education among colleges of varying quality, we expect that

Whereas human capital theory acknowledges the positive role of education — in this particular case, college quality — in raising one's income, in its most traditional form, the theory too often ignores many related issues. For example, previous studies have shown that college quality has a positive effect on graduates' earnings, but not everyone has the same chance of earning degrees at high-quality colleges. Moreover, scant empirical evidence exists to suggest that the effect of college quality is invariant across individuals with different backgrounds. When human capital theorists assume that markets are free, rational, and impartial, and individuals are evaluated solely on their educational credentials, regardless of their gender, race/ethnicity, or social origins, they attribute labor market outcomes to variation in individual choices rather than to variation in systemic or institution characteristics or to variation in ascribed or acquired characteristics of individuals or groups. Therefore, in this limited, traditional form, human capital theory, by itself, is not sufficient to fully inform our understanding of the relationships among family backgrounds, educational attainment, and graduates' earnings. Bowles and Gintis (1975) critique traditional human capital theory in the following way,

The theory of human capital ... ultimately locates the sources of human happiness and misery in an interaction of human nature (preferences and "ability") with nature itself (technologies and resources). This framework provides an elegant apology for almost any pattern of oppression or inequality. ... It provides, in short, a good ideology for the defense of the status quo. But it is a poor science for understanding either the workings of the capitalist economy or the way towards an economic order more conducive to human happiness. (p. 82)

To better understand how socioeconomic class-related variables influence one's educational attainment, social theories that underscore the relationship between socioeconomic class and education are used to provide different perspectives and offer deeper insights into how the effect of college quality on earnings varies across individuals.

college quality has a significant effect on graduates' earnings if larger investments in human capital lead to higher income.

*Social Reproduction Theory.* A major social theory highlighting the interaction between class and education is social reproduction theory.<sup>10</sup> Building on the highly generalizable status attainment theories (Blau and Duncan, 1967; Duncan, Featherman, and Duncan, 1972; Sewell and Hauser, 1975), social reproduction theorists use a critical theory perspective and recognize the positive role of education on labor market outcomes and highlight the impact of class, race, and gender in determining the distribution of educational credentials among individuals. Social reproduction theory (Bourdieu and Passeron, 1977; Cookson and Persell, 1985; McLeod, 1987; Willis, 1981) suggests that the distribution of educational credentials is largely determined by one's socioeconomic class, and institutions such as high-quality colleges help preserve and reproduce the existing social structure.

Some of the earliest work on the issue of social reproduction through education came from Bourdieu and Passeron (1977). Drawing partially on Marxist tradition, they claimed that education produced certain understandings and perceptions that allowed the dominant class to maintain its status. Social reproduction theory shed light on the intergenerational transmission of social inequality and attempted to show how and why the United States could be depicted more accurately as the place where "the rich get richer and the poor stay poor" than as "the land of opportunity" (McLeod, 1987, p. 7). McLeod, Cookson and Persell (1985) explored how class was socially reproduced through education in American society. McLeod studied educational programs (such as the Occupational Education Program, the Enterprise Co-op Program, and the Building and Trades Services Programs) offered to working-class students in high school and illustrated that the system of education in the United States teaches working-class students to be working-class adults. The theme of social reproduction was also animated in a drastically different educational environment by Cookson and Persell (1985),

<sup>10</sup>Other useful frameworks are the signaling (Spence, 1973, 1974) and screening (Rothschild and Stiglitz, 1976) hypotheses. Whereas in principle these two hypotheses involve two types of games and equilibria in the context of asymmetric information, in higher education research they are conveniently referred to as sorting hypotheses: students are sorted according to their educational credentials. For this type of sorting mechanism to work in the particular case of college quality, there must be some costs associated with attending high-quality colleges. Moreover, these costs are higher for some individuals than for others, and those with lower costs have certain traits favored by the labor market. For example, if certain traits of the upper-class are favored in market, college quality may serve as a sorting device because the cost of attending high-quality colleges (tuition and fees, living expense, and otherwise) is relatively lower for students from upper-class families than for others. Interpreted in this way, the signaling and screening hypotheses are in fact consistent with social reproduction theory.



who documented how the philosophies, programs, and lifestyles of boarding schools helped transmit power and privilege of the elite class.

If, according to social reproduction theory, education is the screen through which social value is reproduced and perpetuated, then how are students from different socioeconomic classes sorted into different paths? For many, education seems to be the great equalizer; it provides a playing field where the rich and the poor are seen to compete on an equal basis — on the principle of meritocracy. Quite the contrary, according to social reproduction theory; education actually reinforces social inequality. For example, recent economic studies on the relationship between family income and college enrollment suggest that family income affects college enrollment in at least two ways: short-term credit constraints and long-term factors crystallized in ability (e.g., Carneiro and Heckman, 2002; Kane, 1994). Short-term credit constraints make students from poor families more sensitive to the price of a college education (Kane, 1994). Family income also exerts long-term influence on educational credentials through its effect on individuals' cognitive and non-cognitive abilities (Carneiro and Heckman, 2002). The debate on which effect, short-term or long-term, dominates in the family income-educational credentials relationship is not particularly relevant to our consideration; both suggest that family income gives upper-socioeconomic class students enormous leverage to obtain more prestigious educational credentials, which subsequently help preserve and perpetuate their advantageous social positions.

#### *Socioeconomic Class and College Enrollment*

Researchers interested in education have devoted a great deal of attention to exploring how various social and individual factors — such as socioeconomic class — determine one's level of educational attainment. The line of literature defining this area can be divided into two branches: college choice/access and retention/graduation.

The choice/access literature explores various tasks students must accomplish to realize college enrollment. Among those tasks are academic qualification, graduation from high school, and application to college (Adelman, 1999; Berkner and Chavez, 1997; Hossler, Braxton, and Coopersmith, 1989). A recent study by Cabrera and La Nasa (2001) provides a good example of this branch of work. They found that upper-socioeconomic class students were favored at each of the three tasks on the path to college. For example, the lowest SES students Cabrera and

La Nasa examined were about 51% less likely than the highest SES students in their sample to be academically qualified for college; and controlling for school-level and family background variables still left 15% of the net difference unaccounted for. Moreover, they also found the lowest SES students to be about 25% less likely than the highest-SES students to graduate from high school, even after controlling for other salient variables. Finally, *ceteris paribus*, Cabrera and La Nasa identified a considerable gap (25%) in the college application rate between the lowest SES students and the highest SES students in their sample. All of these gaps identified by Cabrera and La Nasa put those socioeconomically disadvantaged high school students in a tenuous position in terms of college access.

We know a great deal about the influence of socioeconomic background and college going more generally (e.g., Blau and Duncan, 1975; McDonough, 1997; National Center for Education Statistics, 1997; Perna, 2000). Our knowledge in this area suggests a rather unequivocal strong and positive association between socioeconomic status and postsecondary educational attainment. While relatively less attention has been paid to systematically establishing linkages between socioeconomic background and college destinations, there are several noteworthy studies that serve to map out the salient relationships in this area. The findings from this corpus of work demonstrate that young adults from backgrounds of lower socioeconomic status are more likely to attend colleges in the two-year sector and colleges of lesser prestige in the four-year sector than are their peers from more economically advantaged backgrounds. Notable examples of such studies would include a recent analysis by Massey, *et al.* (2002) in which the authors explore racial inequality in college going, destinations, and performance. Other works have focused on pathways to elite colleges (e.g., Hearn, 1990). Three other important studies in this area are by Hearn (1991), Davies and Guppy (1997), and Karen (2002). These studies are noteworthy in that they established the existence of such inequity across three different national representative cohorts of college students in the United States. Davies and Guppy (1997) examined these relationships with data from the National Longitudinal Study of Youth (aged 14–21 in 1979) while Hearn (1991) employed data from the High School and Beyond survey (high school graduates in 1980). Davies and Guppy found that socioeconomic status was significantly related to college selectivity, net of other salient factors. Focusing in groups historically underrepresented in higher education, Hearn's findings suggested that students from these groups were considerably less likely to attend higher quality institutions

than were students from groups with longer-standing histories of participation in the postsecondary sector. Finally, Karen, using data from the National Educational Longitudinal Study of 1988 (high school graduates in 1992), produced a set of findings confirming Hearn's 1991 work using high school graduates from 1980.

Taken together, these efforts point to the relative disadvantage in terms of the probability of attending college (access) and the range of college opportunities realistically available (i.e., choice) to young adults from lower income and minority backgrounds. Explanations for this inequity include vastly different academic socialization and opportunity in primary and secondary schools that yields unequal levels of academic preparation and orientations to college between young adults from different socioeconomic backgrounds (Karen, 2002; Massey, *et al.*, 2002).

The branch of research examining college retention and graduation is dominated by Astin's (1975, 1984) theory of involvement and Tinto's (1975, 1993) concept of integration. These theories have been reconceptualized and elaborated in many ways by educational researchers over the past 25 years (Braxton, Sullivan, and Johnson, 1997; Cabrera *et al.*, 1992; Milem and Berger, 1997; Thomas, 2000b). The most stripped-down and generalizable finding is that white, high ability, females from high SES backgrounds have a higher probability of persisting (Berger and Milem, 1999; Elkins, Braxton, and James, 2000). Research focusing on the "Baccalaureate Gap" and students' transferring from two-year colleges to four-year institutions identifies distinct disadvantages for low-ability and low-SES students (Dougherty, 1992; Lee and Frank, 1990).

In short, the work in this area demonstrates the substantial stratification that exists in postsecondary access and attainment. While the literature is largely silent on the question of "access to what" — a consideration that we feel is essential given the dramatic expansion of higher education over the past 30 years — a noteworthy report from 1998 documents the unbalanced enrollment and persistence patterns of blacks and Hispanics relative to whites between 1984 and 1995 (U.S. Department of Education, 1998).

While some notable work on the relationship between socioeconomic status and the quality of college destinations exists, much scarcer is research focusing on the socioeconomic distribution of graduates from colleges in different quality segments. Zhang (2003) offers a systematic analysis of college going by race, gender, and socioeconomic background. This analysis is particularly important given Turner's (2004) observation that despite a remarkable increase in college participation over the past two decades, very little change in the rate of college

**Table 5.2:** Descriptive Characteristics of Baccalaureate Recipients in 1993 Graduating Classes

	All		Low quality	Middle quality	High quality
	Mean	S.D.	Mean	Mean	Mean
Female	0.5441	0.4981	0.5890	0.5414	0.5016
Native American	0.0059	0.0764	0.0065	0.0060	0.0043
Asian	0.0418	0.2000	0.0229	0.0371	0.0859
Black	0.0628	0.2426	0.1037	0.0587	0.0313
Hispanic	0.0423	0.2013	0.0522	0.0405	0.0387
Age	26.9755	6.6227	28.8741	27.0106	24.5103
Expect MA	0.5795	0.4937	0.6137	0.5790	0.5399
Expect PhD	0.1911	0.3932	0.1695	0.1836	0.2511
Mother high school graduate	0.3152	0.4646	0.3622	0.3285	0.1980
Mother some college	0.1600	0.3666	0.1734	0.1604	0.1421
Mother college graduate	0.1804	0.3846	0.1388	0.1718	0.2699
Mother advanced degree	0.1084	0.3109	0.0649	0.1038	0.1822
SAT/ACT quartile	1.9985	1.3845	1.4959	1.9250	2.9407
Family income (\$10,000)	4.8335	5.4866	3.7233	4.7147	6.7188
N	8642		1561	5796	1285
Notes: Female: 1 = female; 0 = male. Native American: 1 = Native American; 0 = otherwise. Asian: 1 = Asian American; 0 = otherwise. Black: 1 = Black; 0 = otherwise. Hispanic: 1 = Hispanic; 0 = otherwise. White (omitted category): 1 = white; 0 = otherwise. Age: Age as of 12/31/1994. Expect MA: 1 if the highest expected degree is Master; 0 = otherwise. Expect PhD: 1 if the highest expected degree is Doctor; 0 = otherwise. Expect BA (omitted category): 1 if the highest expected degree is Bachelor or less; 0 = otherwise. Mother high school graduate: 1 if mother is a high school graduate; 0 = otherwise. Mother some college: 1 if mother has some college education; 0 = otherwise. Mother college graduate: 1 if mother is a college graduate; 0 = otherwise.					

completion has been witnessed. Zhang's analysis includes a simple descriptive characterization of a nationally representative sample of the 1992/93 baccalaureate graduating class in the U.S. (reproduced here in Table 5.2) and a considerably more sophisticated analysis of factors defining these patterns.

Zhang concludes that socioeconomic factors such as family income and mothers' education take effect in two ways: through a direct impact

on students' educational attainment and through an indirect influence on academic factors.

Other research suggests that those students from economically disadvantaged backgrounds who defy the odds and do make it to elite campuses often face other non-academic challenges related to their background. Granfield (1988), for example, in studying working-class students attending Harvard Law School, poignantly observed that working-class students were taught that unless they downplayed their socioeconomic class background, the most lucrative opportunities would be denied them. This is consistent with accounts from other educational levels. Willis (1981) depicted how working-class students resisted in school, but only in a self-defeating way. These observations suggest that graduating from elite colleges might benefit upper-socioeconomic class students more than working-class students. This conclusion encourages an examination of the effect of college quality across students from different socioeconomic classes. Such an examination can be accomplished by segmenting students according to class-related variables and then examining the effects of college quality for different groups of students.

#### EXAMINING SOURCES OF VARIATION IN THE ECONOMIC RETURN TO COLLEGE QUALITY

Several questions flow naturally from the combined analytical perspectives of the theories of human capital and social reproduction: Do students from various backgrounds have different probabilities of graduating from higher-quality colleges? And does the economic return to college quality vary according to student characteristics such as race, class and gender?

The answer to the first question — an answer outlined in the previous section on socioeconomic class and college enrollment — situates the effect of college quality in the proper context. To understand the effect of educational attainment in terms of college quality across individuals is to first understand the distribution of such educational attainment across individuals. For example, if it can be shown that the effects of college quality are the same (or even larger) for lower-class students than for upper-class students but only the probabilities of earning degrees from higher-quality colleges differ, then it would be reasonable to conclude that differences in college quality serve to preserve and perpetuate the economic status of different socioeconomic

classes. In contrast, if it can be shown that probabilities of earning a degree at higher-quality colleges are the same for lower-socioeconomic class students and upper-socioeconomic class students but the effects of college quality differ, then we may conclude that it is not educational institutions but other forces (such as discrimination in the labor market) that create the income gap. Thus an understanding of both the variability in the probability of earning a degree at a higher-quality college and the variability in the economic effect of college quality across individuals is necessary in order to develop a more complete explanation of the effects of stratification among individuals.

Moreover, from a statistical point of view, who has access to and graduates from colleges of different quality is important in obtaining consistent estimates of the effect of college quality on students. Econometricians call it the selection bias problem (Heckman, 1979). In simple language, students are not randomly selected into different types of colleges; they self-select by optimizing certain individual utility functions. Due to the endogeneity of college quality, the effect of college quality estimated by the conventional OLS technique includes both the true effect of college quality and the return to optimizing behavior in choosing a particular type of institution. To estimate the true effect of college quality consistently, the usual technique involves a selectivity term by estimating a selection equation (Heckman, 1979; Lee, 1983). The selection equation, which estimates the probability of earning degrees at different types of colleges, provides the first step in the well-known two-step or structural approach of estimating the effect of college quality.

The literature on college going generally suggests that the socioeconomically disadvantaged face significantly lower probabilities of college going and completion than do students from more advantaged backgrounds (Hearn, 1991; Davies and Guppy, 1997; Karen, 2002; Massey *et al.*, 2002). While analyses of probabilities associated with attending and graduating from colleges differing in their level of quality are scarce, Zhang (2003) shows powerful effects of socioeconomic background on the quality of college from which one graduates with a baccalaureate. Most relevant to this chapter, work in these areas, taken together, suggests that socioeconomic status has important influences on the type of college from which one graduates, with graduates from lower socioeconomic class backgrounds being significantly more likely to receive degrees from lower quality colleges while those from higher socioeconomic backgrounds being significantly more likely to graduate from higher quality institutions.

With this as a baseline condition, in the sections that follow we present results of a series of analyses designed to provide insight to the second question: does the economic return to college quality vary according to student characteristics such as race, class and gender? Our interest here is merely to demonstrate what we feel to be key points that impact the theoretical considerations associated with the study of college effects. We will present the abbreviated results of five analyses.<sup>11</sup> The first estimates the effect on earnings of college quality for the distribution of baccalaureate recipients across the distribution of colleges conferring 4-year degrees in the United States. The remainder of the analyses reported in this section focus on variance in the economic return to college quality. Specifically we are interested in how race, socioeconomic class, and gender influence these returns.<sup>12</sup>

Our college quality variables are constructed from two sources: the Integrated Postsecondary Education Data System 1992–93 (IPEDS) and Barron's *Profiles of American Colleges*. From IPEDS we determine institutional control (i.e., public v. private). College selectivity data are taken from Barron's *Profiles of American Colleges*. Barron's ratings categorize institutions into six selectivity groups on the basis of entering students' class rank, high school grade point average, average SAT scores, and the percentage of applicants admitted.

In our analyses, we follow the conventional approach by collapsing six selectivity categories into three based on a rating of most competitive or highly competitive (with Barron's rating of 5 or 4), very competitive or competitive (with Barron's rating of 3 or 2), and less competitive or non-competitive (with Barron's rating of 1 or 0). Because perceptions of public and private institutional quality are quite different, we further distinguish between privately and publicly controlled institutions in each selectivity group, yielding six college types: high-quality privates, high-quality publics, middle-quality privates, middle-quality publics, low-quality privates, and low-quality publics. This measure of college quality was used in Brewer and Ehrenberg (1996) and Brewer *et al.* (1999).

<sup>11</sup> Readers interested in a complete treatment of the five sub-questions we deal with in this section are directed to Zhang (2003).

<sup>12</sup> Our examples draw from a commonly used data source, NCEs's Baccalaureate and Beyond (B&B: 93/97). The Baccalaureate and Beyond is a national longitudinal study designed to provide information concerning education and work experiences after completion of the baccalaureate degree. All analyses reported in this paper have been weighted by the B&B second follow-up weights. Our sample of graduates is limited to those who (1) received bachelor's degrees during the period between July 1992 and June 1993, (2) were working full-time, as of April 1997, with annual earnings between \$1,000 and \$500,000 per year, (3) were not enrolled in school full-time, (4) had institutional-level data available. These criteria limit the final sample to 3,965 students across 500 institutions. See Zhang (2003) for details.

We use NCEs's Baccalaureate and Beyond survey to establish a baseline model that will allow us to take the key finding from the literature in this area — namely that there are small but persistent advantages to graduating from higher quality colleges — and to condition them on background factors that may qualify our knowledge by graduates' race, socioeconomic class background, and gender.

Specification of this baseline model follows from studies outlined in a previous section of this chapter: Individual  $i$ 's log earnings ( $\ln(Y_i)$ ) is a function of quality of institution  $j$  he or she actually attended ( $Q_{ij}$ ), demographic characteristics ( $D_i$ ), family background ( $F_i$ ), academic background ( $A_i$ ), job market conditions ( $J_i$ ), and an individual disturbance term ( $\mu_i$ ).

$$\ln(Y_i) = \alpha_0 + \alpha_1 Q_{ij} + \alpha_2 D_i + \alpha_3 F_i + \alpha_4 A_i + \alpha_5 J_i + \mu_i \quad (1)$$

We will use this well established model to examine the effect of college quality on graduates' earnings and report our baseline results in Table 5.3. Findings are presented in Table 5.3 for all variables grouped according to the categories or sets of variables identified in equation (1) above.

The results in Table 5.3 show that graduates' earnings are significantly impacted by institutional characteristics. Holding all student characteristics constant, graduates from high-quality institutions — both public and private — enjoy a roughly 18% earnings premium over those from low-quality public colleges, the base or comparison groups for the design set of dichotomous college-quality variables. Even graduating from middle-quality institutions yields about a 10% earnings advantage over graduating from low-quality colleges. These results do not suggest

Table 5.3: OLS Estimates for the Earnings Equation\*

Variable	Coefficient	$t$
Constant	8.7298	51.72
<i>Institutional Characteristics</i>		
Low-quality, private institution	0.0530	1.42
Middle-quality, public institution	0.0920	4.41
Middle-quality, private institution	0.1066	4.61
High-quality, public institution	0.1800	5.46
High-quality, private institution	0.1754	4.47
Historically black colleges and institutions	-0.1167	2.31

*Continued*



Table 5.3: Continued

<i>Demographic Characteristics</i>		
Female	-0.0936	6.04
Native American	0.1040	1.47
Asian	0.1268	3.46
Black	-0.0109	0.35
Hispanic	0.0438	1.07
<i>Family Background</i>		
Family income (in \$10,000)	0.0055	3.55
First generation college graduate	-0.0233	1.61
<i>Academic Background</i>		
Merged SAT/ACT quartile	0.0081	1.06
Business major	0.2752	11.08
Engineering major	0.4321	14.15
Health major	0.4429	14.28
Public affairs major	0.1473	3.67
Biological science major	0.1493	3.15
Math science major	0.3818	10.39
Social science major	0.1944	5.88
History major	-0.1340	1.38
Humanity major	0.1231	3.80
Psychology major	0.1290	3.31
Other major	0.1471	5.09
<i>Labor Market</i>		
Age	0.0362	4.15
Age squared/100	-0.0433	3.90
Tenure	0.0160	3.37
Tenure squared /100	-0.0058	0.28
Number of hours per week	0.0130	10.95
$R^2$	0.2247	
N = 3965		
<p>Note: Standard errors are corrected for heteroscedasticity.**</p> <p>* The outcome, annual earnings, has been transformed into its natural logarithm for our regression analyses reported throughout the chapter. The coefficients reported therefore represent "log-dollars." One handy by-product of this transformation is that the coefficients can be easily converted into percentage change per one-unit increase in <math>X</math>. While some readers may be inclined to read these coefficients directly in terms of predicted percentage change or difference, the proper transformation is to raise base <math>e</math> (which is approximately 2.71828) to the power of the reported coefficient and then subtract 1 (or <math>e^b - 1</math>). Females, for example, are estimated to experience a <math>e^{-0.0936} - 1 = 0.097913</math> or 9.8% earnings penalty relative to men. All percentages reported in the text of this chapter have been transformed accordingly.</p> <p>** White's heteroscedasticity-robust errors are used in all regression analyses reported throughout this chapter.</p>		

a distinct earnings advantage for graduates from private colleges over public colleges in the same quality category.

Our results are consistent with the corpus of work in this area: net of a range of potentially confounding factors, college quality yields economic advantages after graduation. What neither the literature nor this analysis can tell us however is the degree to which variation in this advantage exists across race, socioeconomic class, and gender.

### *Variations by Gender*

The examination of the variability in the effects of college quality on graduates' earnings by gender falls in the broader discussion of earnings inequality by gender — that is, what accounts for the earnings difference between men and women? Decomposition methods in labor economics suggest that aside from gender discrimination, the earnings gap could be explained by at least two observable and estimable factors. The first is the observed heterogeneity between women and men. For example, the earnings difference between women and men may partially be explained by the relatively lower educational attainment of women — something we do not consider here. The other factor is the variation in the returns to various work-related resources by gender. For example, educational attainment may have different effects on earnings for women and men due for example to different career choices.

Previous studies on the different effects of educational attainment by gender have yielded inconsistent results. Bibb and Form (1977) show that blue-collar women receive lower earnings in relation to their educational attainment, even after controlling for other salient variables. Treiman and Terrell (1975), McClendon (1976), and Rosenfeld (1980) do not find significant differences in the returns to educational attainment (in terms of the highest grade) between women and men. Other studies focusing on the effect of college quality on earnings find that college quality has a somewhat greater effect for women. For example, Mueller (1988) finds that college selectivity has significant direct and indirect effects for both men and women. The direct effects are similar for both genders, while the indirect effect is almost twice as large for women as for men. Solmon (1985) finds stronger evidence that college quality matters less for white men than for white women, even after controlling for undergraduate major, GPA, tenure, and sector. In reviewing the evidence on different returns to educational attainment by gender, Anderson and Hearn (1992) conclude that both the quantity

and the quality of education have a greater impact on women than on men and that the marginal payoff to further education is greater for women than for men.

There are two distinct approaches to empirically examining gender differences in the return to college quality: one can either add interaction terms of college quality and gender variables in the baseline model or estimate separate equations for each gender group. Adding interaction terms, however, restricts the estimated effect of other variables to be the same for male and female students. Moreover, because many interaction terms need to be created (6 categories of college quality and 2 categories of gender yield a total of 12 interaction terms), the results of the model are not easily interpretable. Thus, in our analysis here, we estimate the baseline model separately for male and female students. Differences between the estimated effects of college quality for males and females can then be computed from the results of these separate models. Results from separate models also provide insight into different effects of other variables on the earnings of male and female graduates.

Table 5.4 presents our results. For the sake of presentation, only the estimated effects of college quality are included in the table. The first column in Table 5.4 presents the estimated effect of college quality for the pooled (male and female students) sample, the second column provides the estimates for the sample of female graduates, and the last column shows the sample of male students.

At least 2 observations can be drawn from Table 5.4. First, both female and male students enjoy significant benefits (statistically and economically) from earning degrees at institutions of higher quality. For both public and private institutions, the higher the measured quality of an institution, the higher the benefit it provides. Second, the estimated effects of college quality for female students are uniformly lower than

**Table 5.4:** OLS Estimates for Earnings Equations, by Gender

College quality	Pooled	Female	Male
Low-quality, private institution	0.0530 (1.42)	0.0363 (0.89)	0.0715 (1.07)
Middle-quality, public institution	0.0920 (4.41)	0.0519 (2.28)	0.1317 (3.67)
Middle-quality, private institution	0.1066 (4.61)	0.0734 (2.92)	0.1510 (3.70)
High-quality, public institution	0.1800 (5.46)	0.1678 (4.65)	0.1779 (3.19)
High-quality, private institution	0.1754 (4.47)	0.1612 (3.65)	0.2039 (3.15)

Note: Absolute value  $t$  statistics are included in parentheses.

those reported in the pooled regression, and most of the estimated effects of college quality for male students are higher than those in the pooled regression (although the differences are not statistically significant at the conventional .05 level).<sup>13</sup>

However, when the estimated effects for female students and male students are compared, a pattern opposite to that in Anderson and Hearn (1992) is revealed: The estimated effects of college quality in each category are uniformly smaller for female students than for male students (although the differences are not statistically significant at the .05 level). In other words, although graduating from a high-quality college clearly improves the earnings of both female and male students, outcomes for female students are somewhat less advantaged than they are for male students. The relatively smaller effect of college quality (again, not statistically significant) for female than for male students as found here, however, is consistent with the relatively smaller proportion of female students at high-quality institutions (we will say more about this in a subsequent section of this chapter).

Do higher quality colleges benefit female students more than male students? It appears the answer is “no” (at least for our sample of terminal baccalaureate recipients from 1992/93). The relatively lower returns to college quality for female students may be explained by labor market conditions. For example, in studying labor market segregation, Rosenfeld (1980) suggests that because credentials could be evaluated differently for women and men in the core sector of the labor market, women would have to be over-qualified to get the same position as men. In other words, because women are less likely to be selected into the primary and more competitive sector than men with equal educational attainment, the returns to educational attainment in terms of college quality are lower for women.

#### *Variations by Race*

Like gender, race and ethnicity also figure into patterns of economic status. Farley (1980) shows that the average black family's income then

<sup>13</sup>To compare the estimated coefficients between female and male graduates, we use the following procedures. First, from the two separate models, we calculate the difference in the estimated coefficients and their standard errors. For example, the difference in the effect of low-quality institutions between female and male graduates is 0.0352 with a t-statistic of 0.454. None of the differences are significant individually. Second, because it appears that the estimated coefficients are uniformly larger for the male graduates, we test the joint significance of the differences. That is, we put restrictions on the coefficients for college quality and re-estimate the model, allowing other coefficients to vary. A Chow test is then applied, the results of which suggests that these differences are jointly significant.

is less than 60% of that of the average white family. A more recent study by Kominski and Adams (1994) suggests that, in 1993, earnings among 25–34-year-old black males were only 83% of that of white males in the same age range. Similar to explanations of the gender gap in earnings, educational attainment has been identified as a primary factor in this considerable earnings gap between racial groups. For example, the Kominski and Adams study shows the proportion of 25–29-year-old black males who are college graduates to be only half that of white males in the same age range (12.6% relative to 24.4%). Considering the influential impact of college education on earnings, we would reasonably expect that earnings differences by race should be much smaller, if not eliminated entirely, among college graduates. Indeed, results from the baseline model reported in Table 5.3 do not reveal a significant earnings gap between white and non-white graduates after controlling for college quality.

However, this type of *ceteris paribus* comparison obscures much of the inequity among racial groups. For example, blacks not only have a lower probability of earning degrees from high-quality colleges, but they are also impacted indirectly through significantly lower academic achievement. This type of compound inequity related to educational attainment in terms of college quality was touched upon in an earlier section; the question we attend to here is whether college quality affects graduates' earnings in the same way for individuals of different racial or ethnic backgrounds. Specifically, we ask if high-quality colleges yield more economic advantage to white students than they do to non-white students.

In studying market segregation, Rosenfeld (1980) suggests that the return to educational attainment is lower for non-whites than for whites because whites are more likely to be selected into the primary labor market sectors that yield greater returns. In contrast, in reviewing previous studies on different returns to educational attainment by race and ethnicity (e.g., Chiswick, 1987; Featherman and Hauser, 1978; Jencks *et al.*, 1979; Murphy and Welch, 1989), Anderson and Hearn (1992) conclude that educational attainment in terms of years of schooling — i.e., the quantity of education — has a greater impact on blacks than it does on whites. A more recent study by Dale and Krueger (1999) reports results similar to those of Anderson and Hearn. Such results are consistent with the belief that black students face higher discount rates relative to whites. However, the analysis we present in this section focuses on differences in the effect of educational attainment in terms of college quality between whites and non-whites.

Table 5.5 displays the mean annual earnings for white and non-white graduates (including Native Americans, blacks, and Hispanics) by level of college quality. Among college graduates, the mean earnings of white graduates are slightly higher than that of non-white graduates, although the difference is not statistically significant. However, disaggregating the results by college-quality segment suggests that the effect of college quality may differ between white and non-white graduates. For example, consider that, for low-quality and middle-quality institutions — especially private institutions — the mean earnings of white graduates are higher than that of non-white graduates, yet the relationship reverses for high-quality private institutions. It seems that the earnings of non-white graduates from different colleges are more dispersed across institutional sector and quality categories than are those of whites. This observed difference between whites and non-whites in covariance between sector, quality tier, and income is consistent with the possibility that the effect of college quality could be greater for non-white students than for white students.

There are of course many factors that could drive the patterns

Table 5.5: Means of Annual Earnings, by College Quality and by Race/Ethnicity

College quality	White	Non-White
All	\$ 34,425	\$ 32,447
Low-quality, public institution	\$ 30,965	\$ 31,148
Low-quality, private institution	\$ 36,408	\$ 28,785
Middle-quality, public institution	\$ 33,974	\$ 32,152
Middle-quality, private institution	\$ 35,213	\$ 32,927
High-quality, public institution	\$ 37,769	\$ 36,696
High-quality, private institution	\$ 39,298	\$ 47,517
College quality	White	Non-White
All	10.3324	10.2767
Low-quality, public institution	10.2246	10.2346
Low-quality, private institution	10.3742	10.0974
Middle-quality, public institution	10.3270	10.2817
Middle-quality, private institution	10.3607	10.3243
High-quality, public institution	10.4504	10.4666
High-quality, private institution	10.4121	10.6519
Note: The upper panel represents the means of annual earnings in dollars and the lower panel in logged value.		

**Table 5.6:** OLS Estimates for Earnings Equation, by Race

College quality	Pooled	Non-White	White
Low-quality, private institution	0.0530 (1.42)	-0.0813 (0.97)	0.1242 (2.91)
Middle-quality, public institution	0.0920 (4.41)	0.0527 (0.84)	0.1028 (4.66)
Middle-quality, private institution	0.1066 (4.61)	0.0441 (0.64)	0.1198 (4.86)
High-quality, public institution	0.1800 (5.46)	0.2639 (2.18)	0.1999 (5.62)
High-quality, private institution	0.1754 (4.47)	0.3585 (2.63)	0.1610 (3.86)

Note: Absolute value  $t$  statistics are included in parentheses.

observed in Table 5.5. With this in mind, we specify separate predictive models for whites and non-whites in an effort to control for other covariates that may have contributed to the differences in the effect of college quality observed in Table 5.5. The results of these models are found in Table 5.6. The first column of Table 5.6 contains the estimated effect of college quality for the pooled sample (i.e. white and non-white graduates), the second column reports the estimates for the sample of non-white graduates, and the last column reports the estimates for the sample of white graduates.

The results in Table 5.6 confirm and further amplify the observations from the simple descriptive statistics in Table 5.5. The net effect of college quality on earnings displays quite different patterns for white and non-white graduates. For non-white graduates, earning degrees from middle-quality institutions has a very small and statistically non-significant effect on earnings relative to graduating from low-quality public colleges. For non-whites, the effect of graduating from low-quality private colleges is negative, although it is not statistically significant. However, substantial earnings advantages are provided to non-white graduates from high-quality institutions. For example, compared with earning a degree from a low-quality public college, non-whites earning a degree from a high-quality public college enjoy an almost 30% earnings advantage (0.2639 log points evaluated at the mean of earnings distribution for non-white graduates). Non-whites enjoy even greater advantages when receiving a degree from a high-quality private institution (43%, 0.3585 log points evaluated at the mean of the earnings distribution for non-white graduates). Clearly, graduating from a high-quality college provides a significant earnings advantage for non-whites relative to other

non-whites receiving a degree from a low-quality or middle-quality institution.<sup>14</sup>

Whites receiving a degree from any institution outside of the low-quality public segment enjoy substantively large and statistically significant earnings advantages. However, receiving a degree from a high-quality college does not seem to confer the same earnings advantages for whites as it does for non-whites, suggesting less differentiation exists in the effect of college quality for white students than is observed for their non-white counterparts.

These analyses reveal a pattern of the effect of college quality on earnings by race/ethnicity that is more complex than what Rosenfeld (1980) and Anderson and Hearn (1994) report. Rosenfeld's hypothesis is partially supported in that middle-quality institutions and low-quality private institutions seem to provide greater earnings advantages for white graduates than for non-white graduates relative to those receiving degrees from low-quality public institutions. But clearly, based on our results, statistical discrimination and market segregation do not appear sufficient to explain the large effect of high-quality institutions for non-white graduates. So too, Anderson and Hearn's (1994) conclusion has obscured the complexities of the effect of different types of colleges — i.e., differences in college quality — on graduates' earnings by race.

The complexity in the pattern of different effects of college quality on earnings for white and non-white graduates cannot be easily explained by social reproduction theory although it does provide some insights into the effects of college quality for different racial groups. For example, white students may be more likely to take full advantage of the resources at better institutions. This possibility would explain the greater effect of low-quality private and middle-quality colleges for white students than for non-white students; however, the huge earnings advantage provided by high-quality colleges to non-white graduates begs other possible interpretations. One possible explanation may be a halo effect provided by high-quality colleges. For example, a non-white student who graduated from Harvard may be perceived first as a Harvard graduate and then as non-white, and a non-white student who graduated from low-quality or middle-quality colleges may be perceived first as non-white and then as a college graduate. Another possible explanation is the screening

<sup>14</sup>Moreover, while not examined here, it is probably true that non-white students have larger financial aid packages than their white counterparts and hence experience lower net costs, which would boost the net advantages for non-white students even further (Hill, Winston, and Boyd, 2004).



hypothesis (Rothschild and Stiglitz, 1976). This hypothesis would argue that the large effect of high-quality colleges for non-white graduates may reflect the fact that non-white graduates from high-quality colleges constitute a special group of individuals. Thus, the larger effect of college quality for non-white students than for white students attending high-quality colleges could reflect greater dispersion among non-white students compared to whites in terms of productivity-related traits. Finally, a typical demand-supply argument may suggest that because the number of non-white graduates from high-quality colleges is so small, the interplay of demand and supply may drive up their earnings. In this regard, affirmative action in the labor market might have played a role in opening up more opportunities for minority students.

#### *Variations by Family Income*

In the previous sections we examined the differential returns to college quality by the ascribed characteristics gender and race. In this section and the next, we shift our focus to examine returns to college study by socioeconomic class background. This is a particularly important emphasis for a number of reasons, including the widespread belief that a college education is perhaps the best avenue for upward mobility in society (Public Agenda, 2004). Given the average return on investment in the baccalaureate degree, a case can be made that college quality, as one dimension of educational attainment, plays an important role in promoting socioeconomic mobility. While it may be tempting to draw intuitive conclusions about the relationship between socioeconomic class background and potential returns to college quality, the empirical literature on economic returns is more or less silent on this subject. We explore the issue in this section in an effort to determine the degree to which the effect of college quality on earnings varies across students from different socioeconomic class backgrounds.

Results reported in earlier sections suggest that college quality may have differential effects on earnings for graduates from different racial and gender groups. While race is to varying degrees correlated with socioeconomic class in the United States (e.g., non-whites are more likely to be from lower socioeconomic classes than whites), the link between these demographic characteristics and socioeconomic class is not direct. We examine the pattern in the effect of college quality by two major elements of socioeconomic class: family income and parental education to demonstrate the differential return on investment in college

quality across students from different class backgrounds. The general question we explore here is, “Do students from different socioeconomic classes benefit equally from earning degrees at colleges in different quality segments?”

A corpus of sociological and economic research points to the positive effect of socioeconomic factors on outcomes in the next generation (both direct effects and indirect effects, mainly through education). However, scant attention has been paid to the interplay among those socioeconomic factors and college experiences that presumably help translate background factors into labor market advantages. There are two different types of equity issues implicit in such a consideration. The first concerns the ways in which socioeconomic background encourages or impedes intergenerational mobility while the second concerns the ways in which socioeconomic background influences more immediate socioeconomic well being *vis-à-vis* educational attainment. Consider the possibilities that 1) socioeconomic factors affect educational attainment, 2) socioeconomic factors might influence the effect of attainment, and 3) these effects might be in opposite directions. For example, higher socioeconomic status may lead to higher educational attainment, and higher educational attainment may matter more to the socioeconomically disadvantaged than to the more advantaged.

Similar to our analyses in previous sections, we estimate separate models — this time for students from families with different income levels. We divide family income into three groups of the same size according to the distribution of family income in our sample. Table 5.7 contains the estimated effect of college quality for students from each level of family income. The first three columns present the estimated effect of college quality for graduates with lowest, middle, and highest family income, respectively. The last column is the estimated effect of college quality for the group of students in the top 10% of family income.

Several observations can be made from these results. First, the effects of college quality across levels of family income are far from uniform. For example, earning degrees at high-quality private institutions provides about 12%, 43%, 13%, and  $-4\%$  (i.e., 0.1163, 0.3544, 0.1240, and  $-0.0386$  in log points in Table 5.7, last row) earnings premiums for students from the bottom third, middle third, top third, and top 10% of family income, respectively. Clearly, the average 19% earnings advantage for high-quality private college attendance as estimated in the baseline model (Table 5.3) disguises such uneven effects of college quality for different groups of students. Second, these results suggest that the graduates from families with incomes in the middle group benefit most

**Table 5.7:** OLS Estimates for Earnings Equation, by Family Income

College quality	Bottom 1/3	Middle 1/3
Low-quality, private institution	−0.1271 (2.46)	0.0925 (1.59)
Middle-quality, public institution	0.0375 (1.19)	0.1188 (3.70)
Middle-quality, private institution	0.0316 (0.86)	0.1583 (4.30)
High-quality, public institution	0.1214 (2.33)	0.2431 (3.44)
High-quality, private institution	0.1163 (1.57)	0.3544 (5.71)
College quality	Top 1/3	Top 10%
Low-quality, private institution	0.1960 (2.28)	0.0301 (0.20)
Middle-quality, public institution	0.0887 (2.08)	−0.0361 (0.57)
Middle-quality, private institution	0.0833 (1.77)	−0.1025 (1.44)
High-quality, public institution	0.1451 (2.78)	−0.0254 (0.30)
High-quality, private institution	0.1240 (1.95)	−0.0386 (0.36)
Note: Absolute value <i>t</i> statistics are included in parentheses.		

from earning degrees from high-quality colleges. For example, relative to graduating from low-quality public colleges, graduating from high-quality colleges provides about 12–13% (i.e., 0.1214 log points for high-quality public institutions and 0.1163 log points for high-quality private institutions) earnings advantages for the bottom third group and about 12–15% (i.e., 0.1451 log points for high-quality public institutions and 0.1240 log points for high-quality private institutions) for the top third group. For the middle third group, graduating from high-quality public colleges yields about a 27% (0.2431 log points) earnings advantage and an even larger effect when graduating from high-quality private institutions (43%). Interestingly, the estimated effect of college quality is negative (although not statistically significant) for graduates from the top 10% of families — suggesting that the distribution of earnings of graduates from the most affluent families in our sample are roughly similar regardless of the quality of the college from which they graduated.

The above results suggest that although, on average, earning degrees from high-quality colleges improves graduates' earnings, outcomes for students from middle-income families are somewhat greater than they are for other students. In particular, the earnings of those who are from the very top of the family income distribution are not very sensitive to college quality. This observed pattern seems to be both supportive of and contradictory to what social reproduction theory would suggest. Clearly, social reproduction theory provides some insights in explaining

the relatively higher effect of college quality for students from middle-income families than for low-income families, but it seems not to be capable of explaining the declining effect of college quality for students from high-income families.

There are of course other dimensions to socioeconomic class that might be used to better illuminate the differences we see emerging in Table 5.7. We focus on another of these — parental education — in the following section.

#### *Variations by Parental Education*

Parental education is another important factor influencing, indeed defining, socioeconomic status. Parental education is a primary driver of intergenerational socioeconomic mobility — recall the results of our baseline model (Table 5.3) that show an earnings penalty for first-generation college graduates. In addition to having a direct effect on earnings, the status attainment literature shows that parental education also exerts indirect influence through educational attainment (Duncan, Featherman and Duncan, 1972; Hotchkiss and Burow, 1996; Sewell and Hauser, 1975). Many of the studies summarized in Table 5.1 employ parental education (usually mother's level of education) as a control in models estimating the returns to college quality, but none have specifically conditioned these returns on this variable. In this section, we focus specifically on this issue by modeling the interplay between parental education and the effect of college quality. We focus on the question, "To what degree is the return to college quality influenced by mothers' education?"

We initially divided graduates into five groups according to the level of their mothers' education: less than high school, high school graduates, some college, college graduates, and advanced degrees. Following from our approach in previous sections, we estimated separate models for each group. Our initial results suggested that the estimated effects of college quality are very similar for the first three groups (namely, less than high school, high school graduates, and some college education) so we created a new category that includes all three of these groups. The results from the models for each of the three groups (namely, mother with less than a college degree, mother with a college degree, and mother with an advanced degree) are presented in Table 5.8.

Results suggest that the net return to college quality is not uniform across different levels of mothers' education. For example, earning a

**Table 5.8:** OLS Estimates for Earnings Equation, by Mother's Education

College quality	Less than BA	BA	Advanced degree
Low-quality, private institution	0.0642 (1.36)	0.1032 (0.71)	0.0358 (0.26)
Middle-quality, public institution	0.0821 (2.99)	0.1747 (3.85)	0.0876 (1.46)
Middle-quality, private institution	0.1128 (3.71)	0.1308 (2.57)	-0.0021 (0.03)
High-quality, public institution	0.2013 (4.15)	0.2195 (3.35)	0.0779 (0.76)
High-quality, private institution	0.1481 (2.64)	0.2844 (3.74)	0.0228 (0.21)

Note: Absolute value  $t$  statistics are included in parentheses.

degree at a high-quality private institution provides about 16% (i.e., 0.1481 log points in last row of Table 5.8), 32%, and 2% earnings advantages for students with mothers having less than a college degree, a college degree, and an advanced degree, respectively. The correlation between parents' level of education and family income plays into the consistency between these results and those presented in Table 5.7 for family income. As with family income, the average 20% earnings advantage estimated in the baseline model disguises these uneven effects of college quality across students with different parental education. But beyond these similarities, Table 5.8 reveals a pattern of larger effects for those graduates whose mothers had a B.A. and for those whose mothers had less than a B.A., and smaller effects for graduates whose mothers had a higher level of education. For example, the estimated advantage of graduating from high-quality public institutions is more than 20% (0.2195 log points) for students with mothers having a BA or less, but the corresponding effect is less than 10% (0.0779 log points) for students with mothers having advanced degrees.

We verified the robustness of these findings by using the highest level of parents' education (mother's or father's education, whichever is higher) to replicate this analysis. Because fathers' education and mothers' education are highly correlated, examining the effect of college quality across fathers' education or parents' education yields similar qualitative results. No matter how we measured it here, the return to college quality is positively associated with parents' education between those whose mothers had less than a B.A. and those whose mothers had a B.A., but

negatively associated with the level of parents' education between graduates whose mothers had a B.A. and those whose mothers had more advanced education.

These results suggest that although, on average, earning a degree from a high-quality college improves graduates' earnings, the positive effect is more evident for students from families with parents having lower and middle levels of educational attainment. However, the earnings of those graduates who are from the best educated families are not very sensitive to college quality. Social reproduction theory does not seem to explain the declining effect of college quality for students from well-educated families.

#### *Variations by Major Field of Study*

One's academic major field of study has perhaps the largest influence on post-graduation earning (e.g., Berger, 1988; Griffin and Alexander, 1978; James *et al.*, 1989; Rumberger, 1984; Rumberger and Thomas, 1993; Thomas, 2000a). We conclude our demonstration of variance in the returns to college quality by conditioning the influence of college quality on major field of study. The line of research incorporating major has consistently shown that certain fields of study such as business, engineering, and health have a very large positive effect on graduates' earnings. Math science and social science majors also earn substantially more than education and history majors who are at the bottom of the earnings hierarchy. Our baseline analysis (presented in Table 5.3) reveals similar patterns in the effect of college majors on the earnings of graduates in our sample.

The average effect of college major on graduates' earnings, captured in Table 5.3 and in many of the studies cited above, obscures the possible interaction between college quality and college major. It is plausible that college quality factors into earnings for some majors more than others. If this is the case, then the interaction between college quality and college major must be considered simultaneously to make the optimal college choice decisions implied under the human capital framework.

How might college quality and major interact with each other? Few theories exist that would serve as good guides in this inquiry. Intuitively, assuming individuals are rewarded by being selected into certain sectors of the economy because of their relatively stronger credentials, we would expect to see large effects of college quality for those who have been selected into these sectors. That is, if we view both college quality and

major as educational credentials, then the effect of college quality should be positively related to the effect of college majors. For example, graduating from high-quality colleges may matter a great deal for business majors but may matter little for history and education majors. It should be cautioned, however, that the distribution of majors could be quite different across institutions. High-quality institutions usually have large business, engineering, and science programs but relatively small (or in some instances non-existent) education programs.

For the sake of simplicity, we limit our analysis to 6 large fields of study: business, engineering, health, social science, humanity, and education. These fields have the largest number of observations in our sample (28.9%, 6.4%, 6.1%, 9.1%, 7.2%, and 11.5%, respectively). Among these six fields, business, engineering, and health are usually regarded as the most lucrative majors; social science is in the middle; and humanity and education are at the bottom of the earnings hierarchy. Separate models are estimated for each field, and the abbreviated results are presented in Table 5.9.

Immediately evident in these results is that substantial variation exists in the effect of college quality across graduates of different majors, which suggests that one's choice of institution and major field of study should be considered simultaneously. Second, no clear pattern exists between major field of study and college quality. For business majors, college quality is a strong determinant of their earnings. This result confirms our intuition. For engineering majors, college quality does not seem to be a particularly important factor in determining their earnings. Although it appears that graduates from private institutions have some advantages over those from public institutions, college quality does not matter much within each sector. It seems that for engineering majors, college quality is not as important as it is for business majors. For health majors, college quality appears to matter albeit in the opposite direction of the collective quality-earnings intuition that encourages maximization of college quality. Health is a good example of a technical skill-based field that rewards those coming from more applied and vocationally oriented programs that are rarely found at high-quality schools. The pattern for social science graduates is quite clear, with high-quality public colleges conferring the greatest advantage and low-quality private institutions the least. The estimated effects of middle-quality and high-quality private institutions are small and not statistically significant. For the two lowest-paid majors, humanities and education, only low-quality private institutions are shown to affect graduates' earnings positively for

**Table 5.9:** OLS Estimates for Earnings Equation, by Field of Study

College quality	Business	Engineer	Health
Low-quality, private institution	−0.0406 (0.57)	0.1169 (0.70)	0.2527 (2.78)
Middle-quality, public institution	0.0666 (1.40)	0.0159 (0.35)	0.0092 (0.16)
Middle-quality, private institution	0.0996 (1.94)	0.1337 (2.33)	0.0748 (1.29)
High-quality, public institution	0.1720 (1.46)	0.0668 (1.17)	0.2197 (2.35)
High-quality, private institution	0.2576 (2.15)	0.1686 (1.96)	0.1572 (1.82)
College quality	Soc. Sci.	Humanity	Education
Low-quality, private institution	−0.2849 (2.11)	0.2026 (1.52)	0.0990 (0.93)
Middle-quality, public institution	0.1010 (1.58)	−0.0254 (0.46)	0.0692 (1.50)
Middle-quality, private institution	0.0888 (1.24)	−0.0421 (0.57)	0.0034 (0.06)
High-quality, public institution	0.2851 (3.18)	0.1154 (1.39)	0.0756 (1.10)
High-quality, private institution	0.0951 (0.77)	0.0312 (0.32)	0.2266 (2.14)
Note: Absolute value <i>t</i> statistics are included in parentheses.			

humanity majors, and only high-quality private colleges stand out for education majors.

#### *Consideration of these Results*

In the previous sections, we pushed beyond the existing literature to examine the interplay of the effect of college quality with five variables: gender, race/ethnicity, family income, parental education, and major field of study. We demonstrate that female graduates appear to benefit less from earning degrees at high-quality colleges than do male graduates although the difference is not statistically significant. Our analyses also show that the influence of college quality varies by race. Perhaps counter-intuitively, graduating from high-quality colleges provides a special boost to non-white students, although the effect of college quality is also



substantial for white students. Examining the influence of college quality by two major dimensions of socioeconomic status yielded more or less the same counter-intuitive results. The relative influence of college quality appears to be larger for students from low- and middle-income families than for those from the top-income families. So too, the influence of college quality is larger for students from low- and middle-educated parents than for those from highly educated parents. Finally, analysis of the influence of college quality for different majors suggests that college quality might matter more for lucrative majors than for others and that college quality and college major should be considered simultaneously in arriving at optimal college choices.

Four of these five factors either directly characterize or are indirectly linked with one's socioeconomic status. Results from these analyses, namely, the differential influence of college quality by race/ethnicity, family income, and parental education suggest a pattern that is somewhat counter-intuitive. These findings, in fact, prompt us to pose the question, "If college quality has a smaller effect for graduates from more advantaged socioeconomic backgrounds than for the less advantaged socioeconomic backgrounds, why are there more students from upper-income families enrolled at high-quality institutions?" The following sections addresses this question by examining both our theoretical and empirical findings in terms of the broader questions posed earlier in this chapter regarding the effect of college quality on earnings.

#### A CONTEXT OF STRATIFICATION

American higher education has experienced massive expansion and differentiation in the 20th century, especially over the last 40 years. As the majority of high school graduates in the United States came to attend college, the differentiation of educational attainment increasingly went beyond the dichotomy of college graduates versus non-college graduates. This reality encourages greater attention to other bases on which employers could and apparently do discriminate: bases that include perceived quality of undergraduate institutions.

Many researchers in finance of higher education and in labor economics have made the case that college quality is an important element in the formation of human capital and transmission of socioeconomic status. Weisbrod and Karpoff (1968), Reed and Miller (1970), Solmon (1973, 1975), and Wise (1975) were among the first to explore the effect of college quality on graduates' earnings. Behrman and Birdsall (1983)

suggested that quantity alone was not sufficient to capture the return of education and that quality should be incorporated into the standard Mincerian (1962, 1974) framework. Recently, studies by Brewer and his colleagues (Brewer and Ehrenberg, 1996; Brewer *et al.*, 1999; Eide *et al.*, 1998) and Thomas (2000a, 2003) have significantly improved our understanding of the effect of college quality on an array of student outcomes. These studies recognize that the quality of college education, in addition to a college education itself, might have significant and profound effects on student outcomes, especially the earnings of graduates. These scholars, however, did not emphasize the context in which the effects of college quality on earnings of graduates occur — that is, they did not underscore the centrality of gender, race, or socioeconomic status in determining and explaining variation in the effects of college quality.

In this chapter, we have drawn heavily on the work of these scholars to identify what we feel are significant gaps in our knowledge about the effects of college quality. We have attempted to illuminate these blind spots by critically examining this body of existing knowledge and by providing some basic empirical analyses of our own that we feel begin to address these gaps. Our own analyses have enabled a consideration of some of the discrepancies between the empirical findings of the relatively small effect of college quality on graduates' earnings and what social theories would suggest about the effect of college quality. Our approach was to examine the variability in the estimated effect of college quality among individuals according to gender, race, family income, parental education, and major field. Second, we proceeded to examine the role of college quality in society by linking the analysis of the effect of college quality with the analysis of the effect of socioeconomic status on college quality, thus enabling us to tie these elements together and paint a more complete picture.

In this section, we structure the conclusions we draw from our analyses around two issues. First, we show that the findings presented here help reconcile empirical results and social theories regarding the effect of college quality on students' outcomes. In summarizing our major findings in the first half of this section, we discuss variations in the effect of college quality, suggesting that the average economic effect of college quality as estimated in previous studies disguises many variations of the effect across an array of factors. And more importantly, we argue that our consideration will help us better understand the role of college quality in society. In the second half of this section, we examine the social role of college quality by integrating various components of our theoretical and empirical analyses, arguing that college quality, while

providing an important mechanism for economic and social mobility, at the same time plays a significant role in preserving and perpetuating a stratified socioeconomic structure in American society.

Previous research generally identifies a relatively small although statistically significant positive effect of college quality on graduates' earnings. Two types of discrepancies related to these findings are noteworthy. First, findings of these studies were not totally unequivocal. Studies by Solman and Wachtel (1975), Mueller (1988), and Dale and Krueger (1999) have shown very small effects of college quality on earnings, yet Brewer *et al.* (1999) and Thomas (2003) revealed quite a substantial effect of college quality on graduates' earnings. Second, the majority of findings that college quality had a relative small effect on earnings run against our everyday observations and social theories. Because tuition and fees at elite institutions have been rising rapidly in recent decades, students have had understandable reasons to expect that college quality should pay off commensurately.

Our consideration of similarities and differences in previous studies, combined with the results of our own analyses, leads us to conclude that there exists variability in the effect of college quality among students with different characteristics such as gender, race/ethnicity, family income, parental education, and major field of study; indeed the average effect of college quality observed in previous research disguises much of the variation in college quality effects, as revealed in our own empirical work. Previous studies have consistently shown that demographic characteristics, family background, and educational experience all figure into patterns of economic status (e.g., James *et al.*, 1989). For example, females and minorities earn significantly less in the labor market; socioeconomic variables have both direct and indirect effects on earnings; and academic performance and major fields of study affect earnings significantly. Yet less is known about how these factors figure into the relationship between college quality and earnings. Essentially, the question is whether different groups of students are able to realize the same economic advantage from earning degrees at high-quality colleges. The research on this issue is rather sparse, and the recent existing evidence is ambiguous. One of the few studies in this area is Anderson and Hearn's (1992) thoughtful analysis that reached some very general conclusions with regard to the interaction between individual characteristics and the effect of educational attainment. For example, they suggest that both the quantity and the quality of education have a greater impact on women than on men and that the marginal payoff to further education is greater for women than for men. They also conclude that education

attainment in terms of years of schooling has a greater impact on blacks than it does on whites.

Our analysis in this chapter explores this interaction on a larger scale by examining the different effects of college quality on various dimensions. We show that female students benefit less from earning degrees at high-quality colleges than do male students, although the difference is not statistically significant. This finding is consistent with the observation that female students are somehow less likely to attend high-quality colleges than male students (although the difference is not statistically significant here either). Because earning a degree at a high-quality college is worth slightly less for female students, they have less incentive to do so. Our conclusion with regard to the interaction between gender and the effect of college quality seems to run against what Anderson and Hearn (1992) conclude in their review of previous studies although they caution that the complexity of measuring returns and the different career and family patterns of men and women make definitive conclusions difficult (Anderson and Hearn, 1992).

Although the variation in the effect of college quality on earnings by gender is somewhat ambiguous, the variation by race/ethnicity is much clearer. For non-white graduates (technically defined as Native Americans, Hispanics, and blacks), earning degrees from middle-quality institutions and low-quality private institutions has very small and statistically non-significant effects on earnings relative to graduating from low-quality public colleges; however, substantial earnings advantages are provided to non-white graduates of high-quality institutions. A degree from a high-quality public college yields an almost 30% earnings advantage, and even greater advantages (43%) are associated with receiving a degree from a high-quality private institution. For white graduates, all categories of college provide large and statistically significant earnings advantages relative to low-quality public institutions; however, having a degree from a high-quality college does not provide the same boost to their earnings that non-whites enjoy. In short, although college quality matters for both white and non-white graduates, college quality matters more for non-white graduates than for white graduates.

We also examine the interaction between the effect of college quality and socioeconomic status. In particular, effects of college quality among students of different family income and parents' education levels are considered. In terms of family income, our results suggest that earnings of graduates from low- and middle-income (especially middle-income) families are more sensitive to college quality than those from the top-income families. That is, college quality matters more for students from

low- and middle-income families than for those from upper-income families. The results with regard to another dimension of socioeconomic status, parental education, are very similar to those shown for family income. So, although, on average, earning degrees from high-quality colleges improves graduates' earnings, the positive effect is more substantial for students from families of low and middle levels of parental education than for those from well-educated families. In fact, our results suggest that the earnings of those who are from the best-educated families are not very sensitive to college quality.

The interaction between undergraduate major and college quality has been less often examined in higher education research (see Rumberger and Thomas, 1993 for such a study). Usually, college quality and college major enter the earnings equation independently, explicitly assuming that college quality would affect students of different majors in much the same way. Yet great variation in the effect of college quality exists among different major fields of study. For example, for business majors, college quality is a strong determinant of their earnings, and for engineering majors, college quality does not seem to be a particularly important factor in determining their earnings. For social science majors, only high-quality public institutions matter. And for education majors, only high-quality private colleges matter.<sup>15</sup> Low-quality private institutions provide large benefits for certain majors such as health, likely due to their more career-oriented programs.

The above analyses point to the variability in the effect of college quality among different groups of graduates. Hence the relatively small effect of college quality on earnings documented in previous studies disguises much of the dynamics of the impact of college quality across individuals. In short, the average effect of college quality might not be generalizable to any particular group of students.

In conclusion, previous economic studies on the effect of college quality have either ignored the variation in the economic effect of college quality across various dimensions or have not adequately addressed a range of factors that have been shown to bias findings in this area (e.g., use of different measures of college quality, examination of returns at different points in time in subjects' careers, or the failure to adequately account for subjects with different demographic characteristics and family backgrounds, etc.). Thus, the relatively small effect of college

<sup>15</sup> One possible explanation is that many education majors from high-quality colleges may not hold education related jobs.

quality noted in previous studies is somewhat misleading or, at best, incomplete. Although it is important to identify the discrepancies among previous studies and between empirical results and social theories, it is more constructive, from a sociological perspective, to formulate the social role of college quality from the analysis of this study. The following section examines what we have learned from our review of previous research and from our own empirical work about the role of college quality in society.

#### THE UNIVERSITY AND SOCIETY

Four major themes from our summary of the literature and our empirical analyses in this chapter are particularly important in understanding the role of college quality in society. First, college quality has a significant effect on graduates' earnings although great variation in the effect of college quality exists along various dimensions. For example, our analysis developed in this chapter shows that graduating from a high-quality college provides a roughly 20% earnings advantage relative to graduating from a low-quality college (see the pooled model in Table 5.4). Moreover, previous work suggests that this earnings advantage appears to increase over the early stage of one's career (Thomas and Zhang, forthcoming). On the other hand, our analysis suggests that socioeconomic class variables such as family income and parental education do not seem to have a large direct effect on post-graduation earnings. For example, to the degree our results are representative of those from other studies, an increase in family income by \$10,000 only increases graduates' earnings by less than 1%. Being a first-generation college graduate is associated with a small and usually statistically non-significant earnings penalty. Apparently, socioeconomic factors such as family income and parental education do not tend to have direct effects on earnings.

Second, socioeconomic factors such as family income and parental education have a positive and significant effect on the probability of earning a degree at a high-quality college (Massey, *et al.*, 2002; Zhang, 2003). This effect is both direct and, more importantly, indirect. Other things being equal, students from wealthier and better-educated families are more likely to hold degrees from high-quality colleges (Massey *et al.*, 2002). But things are not equal. Research suggests that the real effect of socioeconomic status operates through a crystallization of intellectual ability. This indirect effect, through the tight connection between socioeconomic factors and ability and between ability and college quality, is

substantial. Indeed, Carneiro and Heckman (2002) found that family income crystallized in ability, instead of family income *per se*, was the major determinant of the family income-schooling relationship. It appears that socioeconomic factors such as family income and parental education tend to exert indirect effects on earnings through their impact on individuals' propensity to invest in education rather than to have a direct effect on earnings (Hearn, 1984; Karabel and Astin, 1975; Rumberger, 1983).

Clearly, in terms of earning degrees at high-quality colleges, social reproduction theory is strongly supported by our analysis of the literature and empirical demonstration. It is supported not only by the strong effect of socioeconomic factors on the probability of earning degrees at high-quality colleges (Zhang, 2003), but also more subtly by the strong connections among socioeconomic factors and the effects of college quality on earnings. The latter indirect connection disguises social reproduction by the principle of meritocracy. In essence, socioeconomic factors and academic factors are not all that separated; they work in tandem. The academically and socioeconomically "rich" become richer while the academically and socioeconomically "poor" become poorer (Hearn, 1984).

Third, the emphasis on educational inequality among socioeconomic classes should not dwarf the positive role of college quality in promoting economic and social mobility in American society. While the effect of college quality is substantial for white students, graduating from high-quality colleges provides a special boost to non-white students. Examining the effect of college quality using two major parameters or indicators of socioeconomic status yields more or less the same results. The effect of college quality appears to be larger for students from low- and middle-income families than for those from the top-income families. So too, the effect of college quality is larger for graduates from low- and middle-educated families than for those from highly educated families.

The relatively larger effect of college quality for lower- and middle-socioeconomic class students suggests that graduating from high-quality colleges provides them with significant potential upward mobility in economic and social status. However, social reproduction theory suggests that students from the lower socioeconomic classes might not have the necessary cultural capital to take full advantage of high-quality education; our analysis indicates otherwise. Bowen and Bok (1998), using data from *College and Beyond*, showed that attending selective institutions "pays off for individuals of all races, from all backgrounds" (p. 276) although due to data constraints they were unable to compare the



magnitude of benefits from attending high-quality institutions among different students. These results suggest that economically disadvantaged students can equally or even better benefit from receiving high-quality college education if they are given the opportunities.

Fourth, the relatively larger effect of college quality for lower- and middle socioeconomic class students, however, does not suggest an advantageous position of lower-socioeconomic class students in American higher education. Certainly, most researchers in higher education are skeptical, if not cynical, about results suggesting that college quality has a larger effect for disadvantaged students. Our analysis and other work suggest that it is greater (see Anderson and Hearn, 1992, for a literature review and Dale and Krueger, 1999, for a recent study); however, the larger effect does not necessarily suggest that disadvantaged students are in an advantageous position in higher education.

The key here is to distinguish the inequality in the educational attainment and the difference in the effect of educational attainment among socioeconomic classes. In fact, research showing that lower-socioeconomic class students are less likely than upper-socioeconomic class students to attend high-quality colleges — yet at the same time lower-socioeconomic class students may benefit more from attending high-quality colleges — is consistent with the human capital argument. From the human capital perspective, students equate the return to investing in high-quality education to the price of such an investment. Because lower- and middle socioeconomic class families have fewer resources to finance a high-quality college education, the price of investing in high-quality education is necessarily higher for lower-socioeconomic class families than for upper-socioeconomic class families.<sup>16</sup> In other words, because a high-quality education is relatively more expensive for lower-socioeconomic class students than for upper-socioeconomic class students, the former tend to under-invest in it and at the same time the return to such an investment is higher for the former than for the latter.<sup>17</sup> Thus, our empirical finding that the less advantaged

<sup>16</sup>Note that the argument here is different from the typical human capital argument with credit constraints (e.g., Card, 2001) where the lifetime income is maximized by choosing the quantity of education. By choosing different types of college education, the quantity of education is assumed to be the same (although many may argue that it takes less time to graduate at high-quality colleges than at lower-quality colleges).

<sup>17</sup>The return to receiving a high-quality education is analogous to the effect of college quality when the cost of a high-quality education is the same across individuals. Arguably, the absolute cost of attending high-quality colleges is less for low-class students than for upper-class students because the former usually receive substantial financial aid at those institutions; however, the relative price of a reduced cost of attending a high-quality college could still be



student can actually benefit more from high-quality education does not contradict the fact, demonstrated in previous research, that lower-socio-economic class students are less likely to attend high-quality colleges than upper-socioeconomic class students.

From all four major themes taken together, our overall conclusion is fairly straightforward. College quality, while providing important opportunities for economic and social mobility, at the same time plays an important role in preserving and perpetuating the stratification of socioeconomic status in American society. The American politics of democracy and ideology of meritocracy endorse a social norm that stresses achievement, more so than ascribed advantages. In other words, the criterion for success is *what you achieve* rather than *who you are*. Thus high-quality college education provides a small yet important pipeline through which lower-socioeconomic class children are able to attend high-quality colleges and capture the associated rewards. In this sense, America can be portrayed as the land of opportunity.

Nevertheless, the emphasis on achievement by no means denies the persistent intergenerational transmission of existing stratification in socioeconomic status. Given the achievement criteria, members of the upper class devote their wealth to providing the high-quality education necessary for their children in order to *demonstrate/obtain* achievement (Bidwell and Quiroz, 1991). College quality (as well as educational quality in general) serves well as an apparatus to convert wealth and social status into achievement. Arguably, from children's early days of life, the quality of educational institutions selected by upper-socio-economic class families, especially those with the highest income, in most cases is superior to the quality of institutions selected by lower-socioeconomic class families, especially those with the lowest income (Kingston and Smart, 1990). Upper-socioeconomic class families, through choosing high-quality education for their children, are able to transmit their socioeconomic status to the next generation. In short, in many ways America's elite colleges are all about achievement and meritocracy, yet the structural features of American society make these schools more accessible for those of status and wealth than for those lacking such advantage. In this sense, the United States can also be described as the place where the rich get richer and (most of) the poor stay poor. Indeed, college quality "enables" class to work its advantages. This

higher for students from lower-class families than for those from upper-class families. In other words, despite the financial aid available at high-quality colleges, they are still less affordable for lower-class students than for upper-class students.

conclusion is consistent with the earlier observations of Kerckhoff (1995) and Trow (1984) who pointed to the opportunities and barriers that American higher education provides in terms of equalizing educational opportunity and encouraging socioeconomic mobility.

In sum, we see conflicting roles of high-quality colleges in American society in terms of their role in encouraging socioeconomic mobility and economic equality. They offer mobility while preserving the status quo; they promote (some) equality while perpetuating inequality. As a result, theories often succeed in predicting and explaining some findings but not all of them. Human capital theory, which perhaps explains the positive effect of a high-quality college education, does not adequately address the intricate relations among socioeconomic class, intellectual ability, and educational attainment. In contrast, social reproduction theory, which better captures the intertwining relationship among these factors, often fails to sufficiently recognize the substantial economic mobility enjoyed by lower-socioeconomic class students graduating from high-quality colleges.

We end this chapter with a consideration of the implications of the conclusions we draw from the literature and new data. The findings of our analysis suggest that high-quality colleges can and do provide distinct economic benefits to lower- and middle socioeconomic class students, thus promoting social and economic equality to some extent. But our interpretation also suggests that students from less affluent backgrounds are less likely to enjoy equal opportunities to receive the highest-quality postsecondary education available. The bias is both direct through relatively higher costs, and indirect, through relatively lower ability and both of these are largely manifestations of the disadvantages of smaller volumes and narrower ranges of resources available to socioeconomically-disadvantaged households. We believe that were it not for the huge amount of need-based student aid, the situation would be much worse. We suggest that equality could further be promoted at two levels.

First, need-based aid, especially need-based grants, should be increased to mitigate the financial barrier blocking access to high-quality colleges for students from low-income families. Despite the fact that these high-quality colleges put an enormous amount of money and effort into providing opportunities for students from all classes, the volume of existing literature in this area still shows that everything else being equal, students from upper-socioeconomic class families are more likely to earn degrees from high-quality colleges than those from lower-socioeconomic class families. The relatively larger effect of college quality for

students from less affluent backgrounds must be viewed in combination with the fact that the relative price of attending high-quality colleges is also higher for these students than for upper-socioeconomic class students. In many high-quality institutions, need-based financial aid packages still include a substantial proportion of loans that effectively create financial barriers for lower-socioeconomic class students.<sup>18</sup>

Second, students from economically disadvantaged classes should not only have the same opportunity in terms of college admission and choice as others (that is good but not enough), but this equal opportunity should be provided much earlier. Removing the financial barriers for students from lower-income families is likely to help equalize opportunities for attending high-quality colleges by increasing affordability. Yet, as we have argued, because social reproduction operates through crystallized family factors in the form of individual ability, financial aid policies of postsecondary education are not likely to solve the long-term inequality issue. Putting it simply, because a disproportionate share of students from poorer families is academically unqualified for admission to high-quality institutions, even if financial barriers were completely removed, they would still represent a small proportion of students on these campuses. Thus policies of postsecondary education are not effectively addressing the root causes of the realized inequality.

This second policy implication clearly goes beyond the traditional realm of higher education. Given the amount of public resources available to promote the social equality, policy makers should decide where and when best to allocate these resources. A recent study by Dearing, McCartney, and Taylor (2001) found that a small amount of money could make a big difference for young children from poor families in early stages of their academic careers. Tennessee's Project STAR provided further evidence that smaller class size (enabled through more financial resources to primary schools) had a significant positive effect on students' achievement during grades K-3 and this positive effect was much larger for minority students than for others. Furthermore, after the students had returned to regular size classes, achievement effects tended to persist in higher grades (Finn and Achilles, 1999; Krueger, 1999; Krueger and Whitmore, 2001; Nye, Hedges, and Konstantopoulos, 1999). Considering the large and persistent achievement effect of focusing

<sup>18</sup>When resources are relatively plentiful, these high-quality institutions are able to eliminate need-based loans. Unfortunately, until now we are aware of only one institution (Princeton University) that is able to do so.

financial resources on students in the early grades, educational policies should focus more at this level.

The value of equality should be emphasized especially in view of the changing demographics of the student body and increasing costs of postsecondary education. Due to immigration and higher birth rates, the under-represented minority population in the United States is growing at a faster rate than the white population. Non-white students represent an increasingly larger proportion in young people in the United States. For example, our own calculation from the published NCES Common Core data indicates that from the school year 1997–98 to 2001–02 the percentage of non-white high school graduates has steadily increased from 28.5% to 30.7%. It also reveals that in school year 2001–2002, non-white students represent 32.2% of the 12th graders, 38.0% of the 8th graders, and 42.8% of the first graders. Another NCES survey shows that in 2000–2001 only less than half (49%) of the public school pre-kindergarten children are white, 24% are Hispanics, and 23% are blacks (Smith *et al.*, 2003).<sup>19</sup> Meanwhile, due to stagnant median family income and rising tuition at high-quality colleges in the last couple of decades, high-quality college education became less affordable for more American families. For example, Ehrenberg (2000) documented that the tuition and fees at Cornell University as a share of median family income in the United States rose from 28% in early 1980s to 49% in later 1990s. These dynamics urge continued and expanded attention on the equality issue in American higher education.

It should be cautioned, however, that equality is not the single value pursued by high-quality institutions (or by higher education as an enterprise). In fact, other values such as efficiency and liberty are equally essential to high-quality colleges.<sup>20</sup> For example, high-quality institutions should take the responsibility for educating the best students in the nation and around the world, especially in the current political economy emphasizing the centrality of global competition. Therefore, we believe that some preferential packaging and merit-based aid is necessary to encourage and attract the best students into fields of great importance to state and national interests. We hope that this chapter encourages work that informs the viability of these and other policy actions aimed at reducing the stratification in higher education.

<sup>19</sup> The Western Interstate Commission's 2004 *Knocking on the College Door* report suggests these patterns will continue across the coming decade.

<sup>20</sup> For a detailed discussion on some of the core values pursued by educational policy, see Garms, Guthrie, and Pierce (1978).

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## 6. THE CAUSES AND CONSEQUENCES OF PUBLIC COLLEGE TUITION INFLATION

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Everyone in America knows that college prices have been going up at an alarming rate. For nearly three decades, tuition inflation has been the subject of continuing family concerns, student anxiety, gubernatorial proclamations, and congressional investigations. In spite of this, there is no end in sight. In the last three years, tuition inflation has accelerated to its fastest level yet. In 2002–03, tuition and fees at four-year and two-year public institutions rose, often startlingly so, in every state. In Massachusetts, for example, tuition jumped from \$3,295 to \$4,075, an increase of 24 percent in one year. Iowa, Missouri, and Texas increased tuition by 20 percent. In Ohio, the increase was 17 percent. Sixteen other states increased tuition by more than 10 percent (Trombley, 2003, p. 1). There is no reason to believe that this acceleration of tuition inflation rate was a one-year phenomenon. Rather, it seems likely to be simply the next wave in a steadily accelerating price spiral that has been going on for nearly 25 years.

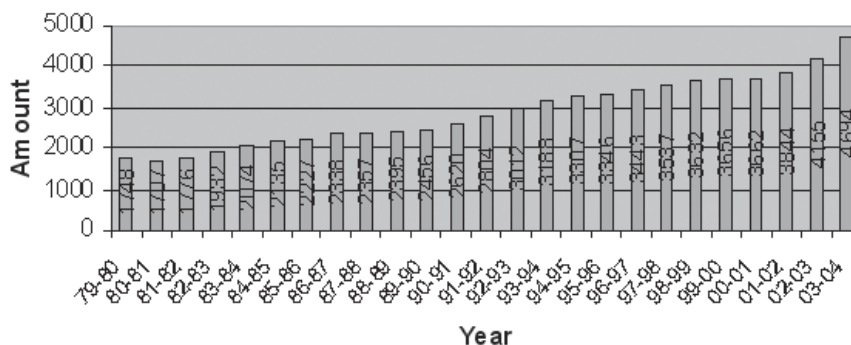
In spite of this, it is important to note that rising prices do not seem to be driving down the demand for higher education. The number of students enrolled in college seems to increase every year. The portion of high school graduates attending college increases as well. In 2002–03, for example, more than 15 million students were enrolled in degree granting institutions of higher education. Twelve million of these students, about 65 percent, attended public institutions. By almost any measure, more students are entering college in spite of the rising prices. One study put it this way, “To enhance their opportunities and realize their educational aspirations, Americans work more hours than in the

past, incur greater debt, and devote larger portions of their incomes to paying for college” (National Center for Public Policy and Higher Education, 2002b, p. 1).

This chapter explores both the causes and consequences of public college tuition inflation. We have chosen to focus on public colleges for several reasons. The vast majority of students in the United States attend public colleges. In addition, public colleges have traditionally served as a way for lower-income and disadvantaged students to earn the skills necessary to get a good job and to obtain entry into the middle class. As prices rise, there is some reason to believe that public colleges may no longer be able to perform this important role. Public and private institutions of higher education are constructed on quite different financial foundations. There have been two outstanding books focusing on the reasons for the price inflation at the nation’s elite private colleges (Ehrenberg, 2000; Clotfelter, 1996). Yet, the best studies of public college tuition inflation are now more than a decade old and predate the rapid tuition inflation of the early 2000s. Finally, we limit our focus to the period after 1980. This is the point at which real public college prices began their current upward trajectory.

In addressing these important questions, we begin by looking closely at the patterns of tuition inflation. In the first part of this analysis, we look at recent patterns in tuition and fees at two- and four-year colleges. Next we turn to the factors that seem to be driving prices upward. We examine the different ways in which public colleges set tuition. Then we look at the factors that have contributed to the rising prices. To do this, we take a careful look at the recent changes in the sources of revenue available to public colleges and the spending levels and patterns of these institutions. We will also examine how changes in the level of support provided by state governments have altered the financial basis on which public institutions operate. Here, we consider the particular impact of the recession of the early 21st Century and the rapid increases in Medicaid spending on the ability of state governments to continue to support higher education at traditional levels.

In the second part of the chapter, we examine the consequences of tuition inflation on students, families, and institutions. Here, we seek to determine if citizens and policymakers should be concerned about the short- and long-term impact of rising prices. The answer to this is not as straightforward as some people assume. In this section, we show the impact that rising prices have on enrollment, particularly among students from lower income or disadvantaged backgrounds. We do this by looking at the research on the role price plays in determining student

**Figure 6.1:** Average Tuition and Fees at Four-Year Colleges Enrollment Weighted

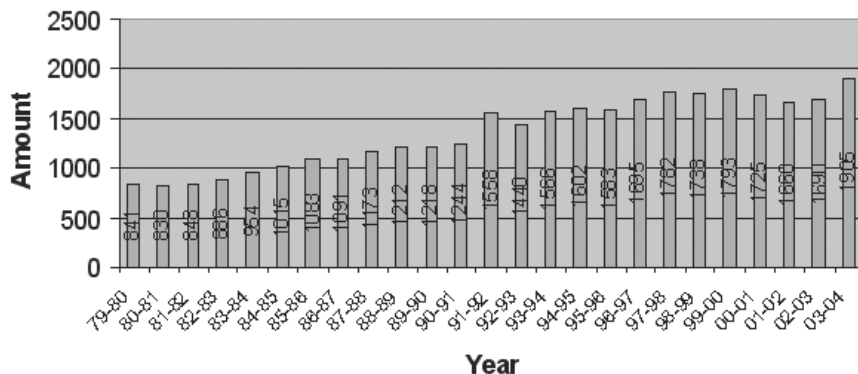
aspirations for college, their choice of institution, their likelihood of graduation, and their post-graduation debt levels. We will show how rising prices have a disproportionate impact on the lowest income families at each stage. Finally, we consider the troubling impact that the same changes in the fiscal environment that are driving college costs upward are having for public universities.

#### THE TWENTY-FIVE YEAR TRENDS IN COLLEGE PRICES

While public college prices have increased at a remarkable rate over the last two decades, a closer look at those increases over time and across sector reveals complex and variable patterns. During the 1970s, constant dollar tuition and fees at public colleges actually declined slightly. When this drop in prices is coupled with the dramatic increases in federal grant aid, access to public colleges improved markedly for all income groups (Mumper, 1993).

But beginning in about 1980, prices at four-year public colleges began a relentless upward spiral in which average prices increased every year for the next 24 consecutive years. Figure 6.1 shows that, in constant dollars, tuition at a public four-year institution increased by more than 168 percent between 1980–81 and 2003–04. However, those increases have not happened at a steady pace. During the 1980s and early 1990s, as measured in real terms, four-year public college tuition inflation was about 5 percent per year. Then in the mid-1990s, it suddenly slowed down. From 1995–96 to 2000–01 the real rate of increase was less than 2 percent per year. Unfortunately, as the new century began, the price spiral returned with even more intensity. Between 2000–01 and 2003–04, public college tuition increased by a remarkable 28 percent.

**Figure 6.2:** Average Tuition and Fees Public Two Year Colleges Enrollment Weighted



The pattern of price increases at two-year colleges has been slightly less severe, but much more volatile. Figure 6.2 shows that between 1980 and 2003, real prices in this sector increased by 126 percent. As with their four-year counterparts, prices increased steadily throughout the 1980s and then slowed toward the end of the decade. This was followed by a rollercoaster ride through the 1990s, where prices alternated between large increases and modest reductions. Then, in 2003–04, prices spiked upward again, increasing by more than 11 percent in one year. While the trend lines for two- and four-year colleges were different, the eventual outcome was the same. By the early part of the 21st Century, prices in both sectors were higher than they had ever been, and price increases were accelerating at unprecedented rates.

In order to place these trends into context, it is useful to compare the changes in college prices with the trends in family income over the same period. A recent report by a congressional subcommittee described the relationship this way:

If tuition had doubled over the past decade, but incomes tripled during that same time, the general public may not be nearly as concerned about the affordability of higher education. However, the fact is that by two common measures of income — median household income and per capita disposable income — college tuition increased faster than income (Boehner and McKeon, 2003, p. 2).

Indeed, this has been the case since 1980. Table 6.1 shows the relationship between family income and public college prices between 1980 and 2001. A family earning the mean income at the top fifth of the distribution would spend less than 3 percent of their annual income

**Table 6.1:** Portion of Annual Household Income Required to Pay for One Year of Tuition and Fees at a Public Four-Year Institution by Income Quintile

Income Quintile	1980	1985	1990	1995	2001
Highest Fifth	1.8%	2.2%	2.3%	2.6%	2.5%
Second Fifth	4.7%	4.0%	4.5%	5.5%	5.5%
Middle Fifth	4.0%	6.0%	6.7%	8.5%	8.5%
Fourth Fifth	7.8%	9.9%	11.1%	14.2%	14.3%
Lowest Fifth	18.7%	24.5%	27.7%	34.8%	36.0%

Source: Author's calculations. Income data from: US Census Bureau 2004, [www.census.gov/hhes/income/histinc/f03.html](http://www.census.gov/hhes/income/histinc/f03.html), tuition data from College Board (2003).

to cover one year at a four-year public college. A family earning the mean income of the middle fifth of the distribution would spend 8.5 percent. The family at the mean of the lowest fifth of the distribution would pay 36 percent of their annual income to cover the costs of one year at a four-year college. As a consequence, from the point of view of American families, the impact of the post-1980 public college tuition inflation was quite uneven. For those families near the top of the distribution, incomes increased enough to nearly keep pace with public college tuition inflation. Put another way, the share of their income needed to cover the cost of a public higher education remained relatively stable. But for families in all the other income quintiles, the cost of a public college education took an ever larger portion of their income. Those 20 percent of families at the bottom of the distribution now find one year at a four-year college equal to more than one-third of their annual pre-tax income. It is no wonder why these rising prices have received so much attention in the media and have created so much anxiety for American families.

### TUITION SETTING AT PUBLIC COLLEGES

Before we turn our attention to why prices have increased, it is important to understand the philosophies which guide tuition setting and the different ways by which public institutions set their tuition. In this section we review the different views on the proper level of public college tuition, we describe the processes through which institutions set tuition, and then discuss some of the problems that these differences



have for establishing responsibility, or accountability, for the current round of tuition inflation.

There are two schools of thought on the appropriate level of public college tuition. In one view, states ought to keep public college tuition as low as is reasonably possible. Low tuition is said to encourage increased participation and open the doors of higher education to the widest possible number of citizens. Moreover, increasing the number of people going to college benefits the whole community economically and socially. It was based on this view that most states kept tuition low throughout the 1950s and 1960s.

But in the 1960s, as baby boomers began to enter college in record numbers, many states could no longer afford to provide the generous subsidies necessary to maintain low tuition. As prices began to edge upward, a number of scholars and policy analysts began to argue that the philosophy of low tuition pricing was misguided. In this view, when states keep tuition low, they provide a subsidized education for all students. But many of those students could afford to pay for most, or all, of their higher education from personal or family funds. This was seen as an inefficient use of public funds. Instead, they argued that the states should pursue a high tuition/high aid policy in which they raise public college tuition for everyone and then use the extra funds to provide need-based grants to those with financial need. By doing this, states could develop a pricing pattern that followed a sliding-scale in which families see their price increase as their family income increases.

While high tuition/high aid pricing became popular at some private colleges in the 1980s, it has played a very small part in the price increases at public colleges. Few states have embraced the high tuition approach. In a survey conducted by the State Higher Education Executive Officers, 20 states reported embracing a philosophy of keeping tuition at a low or moderate level. Only six states described their present philosophy as high tuition/high aid. The remaining states reported that their state has no statewide tuition philosophy, that tuition policy is guided by institutional levels philosophies, or that there is no statewide philosophy at all (Rasmussen, 2003, p. 9).

#### THE PROCESS OF TUITION-SETTING

States vary widely in where they vest the authority to set public college tuition. That authority may be exercised by the legislature, the state governing/coordinating agency, individual system boards and/or

individual institutions. In several states, that authority is shared by more than one entity. In some states, a governing board holds authority for setting tuition for its member institutions while selected other institutions are individually responsible for determining tuition rates (Pennsylvania and Mississippi). In Kentucky, the authority to set tuition was transferred from the state-level Council on Postsecondary Education to individual institutions beginning in 2000. North Dakota, Oklahoma, and Virginia have also recently decentralized tuition making authority to institutions.

**Table 6.2:** Primary Authority for Establishing Tuition

Legislature (4)	State Coordinating/ Governing Agency (18)	System Board (12)	Individual Institutions (16)
Florida	Arizona	Connecticut	Alabama
Louisiana	Georgia	Illinois	Arkansas
Oklahoma	Hawaii	Minnesota	Delaware
Texas	Idaho	Nebraska	Florida
	Iowa	New Jersey	Illinois
	Kansas	New Hampshire	Indiana
	Louisiana	New York	Kentucky
	Maine	Pennsylvania	Maryland
	Massachusetts	Tennessee	Mississippi
	Missouri	Vermont	Missouri
	Nevada	Washington	Ohio
	New Mexico	Wisconsin	Pennsylvania
	North Carolina		South Carolina
	North Dakota		Virginia
	Rhode Island		Washington
	South Dakota		West Virginia
	Utah		
	Wyoming		

Source: Rasmussen (2003, p. 10)

However, state governments have important direct and indirect ways in which they can control tuition even when they do not have tuition setting authority. Most directly, state governments can impose caps on tuition inflation. Between 1999 and 2002, 19 states imposed a “curb, cap, freeze or other limitation” on the ability of its institutions or a state board to set tuition. In Connecticut and Washington, for example, the legislature appropriated replacement revenue that allowed institutions to freeze or maintain tuition increases below a certain level. In New

Jersey, the Governor advised institutions to limit their tuition increases to 10 percent or face a special audit from the Commission on Higher Education. Missouri experimented with indexing tuition to the Consumer Price Index. Maryland fixed tuition increases at 4 percent per year. In Ohio, the state lifted tuition caps in 2002 after several years with a 6 percent cap. The resulting 12 percent increase across the state that year led the state to re-impose the cap following the year (Rasmussen, 2003, p. 13).

States also have less direct, but equally effective ways to control price setting at public colleges. Since the state legislature determines the appropriation to higher education each year, they are in a position to punish campuses that attempt to raise tuition beyond accepted limits. They can also reward campuses who hold the line on price increases. Similarly, governors often appoint the members of the campus Boards of Trustees or the state governing board. These appointees, in turn, oversee campus budget decisions. Governors can thus indirectly influence pricing through the type of person they appoint and through their interaction with those appointees.

#### PUBLIC ACCOUNTABILITY AND PUBLIC COLLEGE TUITION INFLATION

Despite the seemingly straightforward divisions of authority between campus and state leaders, the situation in practice is much more ambiguous. In most states tuition levels are actually the result of a negotiation, often implicit, between campus leaders and the state government. Public colleges rely on the states for a substantial portion of their revenue. States often try to use the leverage that this gives them to try to force colleges to hold their prices down. Similarly, colleges use threats of price increases as a tactic to leverage additional dollars from state policymakers. When tuition inflation is high, colleges place the blame on reductions in state support. State policymakers, in turn, blame campuses for uncontrolled spending. Conversely, during times of lower tuition inflation, campuses take credit for their attention to the bottom-line and their careful institutional planning. States also claim credit for the achievement, arguing that it was the result of their more generous support of campuses or to the careful exercise of their oversight responsibilities.

The result of this ambiguity is that the public can never be clear on who is accountable for rising public college prices. One report described it this way

The authority to set tuition is generally shared among the legislature, governor, governing boards, and sometimes the campuses in multi-campus systems. As such, decisions about tuition changes occur where there is a broad based shared responsibility between government and higher education, rather than the authority to act unilaterally, which is clearly held by one side or the other. This means that tuition decisions are political, and that a number of interest groups try to influence the process (Institute for Higher Education Policy, 1999, p. 24).

This lack of a clear chain of accountability also makes it less likely that any one side will take the initiative to bring the problem fully under control. Since tuition is generally negotiated by several interested parties and over time, no single institution is clearly responsible for the rising prices. Moreover, since no one seems to be clearly to blame, as tuition increases, no one is likely to receive the credit for slowing its growth. That same report made this point.

Because tuition increases are a political hot potato and because responsibility for approving them is shared between the academy and state government, the result is a form of tuition “chicken” where each waits for the other to take the initiative (Institute for Higher Education Policy, 1999, p. 25).

One important response to this ambiguous accountability has been that the U.S. Congress has occasionally felt compelled to address the issue of tuition inflation. This occurred first in 1997 with the creation of the National Commission on the Cost of Higher Education. While the Commission was in operation less than a year, its final report, *Straight Talk About College Costs and Prices* (1998), represented the most comprehensive work on the subject to date. More recently, in preparation for the reauthorization of the Higher Education Act, Representatives John Boehner and Howard McKeon issued a follow-up report entitled, *The College Cost Crisis: A Congressional Analysis of College Costs and Their Implications for America's Higher Education System* (2003). This report proposed legislation that would penalize all institutions of higher education for raising tuition by making them ineligible for participation in some of the Title IV student aid programs. While it would not cut Pell subsidies or federal student loans, students would be at risk of losing support from other programs such as College Work Study and Supplemental Educational Opportunity Grant Programs. Proponents of the legislation claim that higher education consumers — parents and students — are worried that they will not be able to afford college if campuses continue to raise tuition at twice the rate of inflation.

Opponents believe that any attempt to control higher education prices will lead to a decline in quality and access. As Jamie P. Merisotis, president of the Institute for Higher Education Policy states, "A federal foray into controlling the prices charged by institutions would be unwise and potentially destabilizing" (Burd, 2003). Regardless of their ultimate effectiveness, such reports illustrate the great concern tuition inflation creates for national policy makers.

#### THE MULTIPLE CAUSES OF PUBLIC COLLEGE TUITION INFLATION

The causes of the public college price spiral have been the source of substantial study of the past few years. While each of these studies identifies a slightly different configuration of factors, all of them agree that the phenomenon is not the result of a simple cause. Indeed, the best explanation of the causes of tuition inflation remains the one presented by Arthur Hauptman in *The College Tuition Spiral* (1990):

What is the bottom line reason for the college price spiral? This report identifies a number of hypotheses, each of which is found by the subsequent analysis to have something to contribute to the argument. But the bottom line is that there is *no* overarching explanation (p. vii).

Certainly the most highly publicized study of the causes of tuition inflation was conducted by the National Commission on the Cost of Higher Education. It brought together a wide range of opinions, and it made use of extensive quantitative analysis as well as expert testimony. Yet, the Commission was unable to reach agreement over the causes of the price increases. It did agree on five "convictions," including such non-controversial positions as, "The concern about rising college prices is real" and "The public and its leaders are concerned about where higher education places its priorities" (1998, p. 13).

The National Commission report set out to identify the causes of rising college prices. Yet, after reviewing pages of statistical and testimonial data regarding each potential cause, it hedged in its conclusions. After posing the question, "Have increases in college and university administrative costs affected tuition increases?" the answer was a definitive "Possibly" (p. 248). In response to the question, "Have costs to construct and renovate campus facilities affected tuition increases?" the answer was "Probably" (p. 266). And, the answer to "Have technology costs driven tuition up?" was "Possibly" (p. 266). Such answers, of

course, are less than satisfying. Yet, the fault does not lie with the Commission or its staff. These tentative conclusions reflect the substantial and heated disagreement among the experts on these issues (Mumper, 2001).

#### THE ELEMENTS OF THE PUBLIC CAMPUS BUDGET

The search for the causes of tuition inflation begins with an examination of the public college budget. On its face, that budget is not a complex document. Campuses receive their revenue from subsidies provided by state governments; tuition and fees paid by students; private gifts; and from auxiliaries such as dormitories, food services, and research commercialization. A few generate revenue from endowment income. They spend those dollars on instruction, administration, research, student services, libraries, and the operation of those auxiliaries. It is noteworthy that many of these functions are very labor intensive. As such, public colleges devote substantial portions of their budgets to the salaries and benefits of their employees.

Since 1980, public colleges have experienced changes in both their revenue and expenditure patterns that have driven much of the tuition inflation. In the following section, we will consider the ways in which campus revenues have changed and the ways in which expenditures have changed. Finally, we consider how demographic and economic forces have altered the demand for higher education which, in turn, has also created pressures for institutions to raise prices.

#### CHANGES IN CAMPUS REVENUE

Public colleges generate revenue from a combination of public and private sources. As shown in Table 6.3, public colleges today receive the largest portion of their income, 35.8 percent, from state governments. They receive an additional 10.8 percent from the federal government and 3.8 percent from local government. This represents just over 50 percent of public college revenue that is generated from government sources. However, as recently as 1980, governments supplied 66.2 percent of all public college revenue. Clearly, public colleges are relying less on these public funds than at any time in the recent past.

A closer look at these figures reveals that the decline in government support occurred primarily at the state level. The portion of revenue from the federal government declined during the early 1980s. But since 1985, it has remained largely stable. Moreover, this measure significantly

**Table 6.3:** Percentage Distribution of Current Fund Revenue of Public Degree Granting Institutions by Source

Type of Revenue	1980	1985	1990	1995	2000
Tuition and Fees	12.9%	14.5%	16.1%	18.8%	18.9%
Federal Government	12.8%	10.5%	10.3%	11.1%	10.6%
State Government	45.6%	45.0%	40.3%	35.8%	35.7%
Local Government	3.8%	3.6%	3.7%	4.1%	3.8%
Private Gifts	2.5%	3.2%	3.8%	4.1%	4.5%
Endowment Income	0.5%	0.6%	0.5%	0.6%	0.6%
Sales and Services	19.6%	20.0%	22.7%	22.2%	22.3%
Other	2.4%	2.6%	2.6%	3.3%	3.7%

Source: U.S. Department of Education (2002, p. 372).

underestimates the overall level of federal support. This is because the majority of federal aid to higher education is appropriated in the form of grants and loans to students. Students, in turn, use these funds to pay for their tuition, fees, room, and board. As such, institutions receive these grant and loan dollars from students, and they are thus classified as tuition income rather than federal support. Still, in many cases those tuition dollars would not be there without the federal grant or loan.

It is the state portion of public college revenue that has declined over time. In 1980, state governments provided public colleges with 45.6 percent of their revenue. By 2000, that had declined to 35.8 percent. The decline occurred primarily during the recession of the late 1980s and early 1990s. These may seem like relatively small changes, especially considering that the trends occurred over nearly 25 years. But even small changes in state support can produce a dramatic impact on public college tuition. A report by the National Education Association Research Center (2003) illustrates the point

If a college receives an average of \$5000 per student in support from the state and each student pays \$1000 in tuition, a total of \$6000 is spent on the student's education. However, if the state support is eroded by 10 percent, or \$500, tuition must go up 50 percent to compensate. Small cuts in state support thus result in large relative increases in tuition (p. 3).

In order to replace the revenue that was no longer supplied by state government, public colleges have increasingly turned to private revenue sources. The largest of these is revenue from tuition and fees. In 1980,

public colleges received 12.9 percent of their revenue from tuition and fees. By 2000, that had increased to 18.5 percent. This shift is a central reason for the tuition inflation of the past 25 years (Mortenson, 2003b, pp. 1–10).

Other changes in campus revenue patterns reveal a similar substitution of private for public funds. Sales and services increased from 19.6 percent of public college revenue in 1980 to 21.6 percent in 2000. Private gifts, grants, and contracts increased from 2.5 percent to 4.8 percent. In combination, tuition, fees, sales, services, grants, contracts, and gifts, largely private sources of revenue has increased from 35 to 45 percent (National Center for Education Statistics 2004a). It represents a clear substitution of public support for public colleges with private support.

A study examining the relationship between tuition, campus revenue, and campus expenditures reached the following conclusion

For public four year institutions, revenue from state appropriations remains the largest source of revenue and is the single most important factor associated with changes in tuition. Over the period of time examined, state appropriations revenue decreased relative to other sources of revenue for all types of public four year institutions and, in fact, experienced real annual decreases for research/doctoral and comprehensive institutions. Decreasing revenue from government appropriations was the most important factor associated with tuition increases at public four year institutions over the period of the analysis (Cunningham, Wellman, Clinedinst, and Merisotis 2001, p. 8).

Similarly, in an examination of public college tuition inflation between 1974 and 2004, Thomas Mortenson (2003b) places the blame for tuition inflation at public college squarely on the back of state government. He finds that tuition rates are strongly negatively related to state funding effort.

These broad aggregate relationships should not obscure the significant differences that exist among the states in the ways in which they support public higher education. As shown in Table 4, some states like California and North Carolina continue to receive relatively low portions of their revenue from tuition. These states have been able to maintain low tuition. Conversely, states like Vermont rely to a much larger extent on tuition and much less on state appropriations.

#### STATE BUDGETS AND TUITION INFLATION

The fact that colleges now receive a smaller portion of their revenue from state subsidies is, at least in part, a result of decisions by the states



**Table 6.4:** Percentage of Current Fund Revenue of Public Degree Granting Institutions by Source of Funds  
Selected States: 1998–99

State	Tuition and Fee Revenue	State and Local Appropriations	All Other Revenue Sources
California	12.3%	46.4%	41.3%
Georgia	15.2%	51.7%	33.1%
Illinois	18.1%	44.9%	37.0%
North Carolina	10.8%	51.9%	37.3%
Ohio	27.5%	34.3%	38.2%
New York	23.5%	44.1%	32.4%
Virginia	22.8%	31.5%	45.7%
Vermont	43.0%	13.4%	43.6%

Source: U.S. Department of Education (2002, p. 379).

to provide less generous support to public colleges. In a widely cited analysis, Harold Hovey (1999) describes the role that higher education plays in state budgets as a “balance wheel.” He argues that when state finances are strong, appropriations for higher education have risen disproportionately to appropriations for other functions. But appropriations for higher education are cut disproportionately when state fiscal circumstances are weak. He describes it this way:

Selection as a balance wheel results from some perceived characteristics of higher education relative to other objects of state spending. First, higher education institutions have separate budgets with reserves of their own and perceived fiscal flexibility to absorb temporary fiscal adversity, unlike state agencies which do not have those features. Second, higher education is perceived as having more flexibility to translate budget changes into employee pay than state agencies which are bound by statewide pay scales, and local education agencies which are subject to collective bargaining and multi-year employee contracts. Third, higher education is seen as having more flexibility to vary spending levels (e.g. through changes in courses offered and class sizes) than most programs, which have spending levels that are more fixed. Fourth, in most states, higher education has the ability to maintain and increase spending levels by shifting proportions of costs to users by tuition and fee increases (Hovey, 1999, p. 19).

A survey of the chairs of state education committees found that a strong majority believe that “The ability of colleges to raise their own money

through tuition, research grants, and gifts” was a significant factor in determining how much money the legislature will appropriate to higher education (Ruppert, 1996, p. 9).

#### THE CHANGING SHAPE OF STATE BUDGETS

The last two decades have been a period of extreme stress for state budgets. The 1990s began with a recession, was followed by a period of sustained growth, and ended with another recession. Along the way, the states were whipped-sawed between increasing demands of citizens for greater services, the ebbs and flows of state revenue from all sources, and the on-going pressure to reduce state tax burdens. Citizens in many states were unwilling to support tax increases during lean budget years and then demanded tax rate reductions when state budgets were healthy. The federal government passed on an endless stream of mandates that required new expenditures, yet they were increasingly less willing to provide the states with financial relief for those mandates. Finally, state sales tax revenues were hurt by the substantial growth of untaxed internet sales (National Association of State Budget Officers, 2003, p. 10).

Table 6.5 shows how state expenditures have changed since 1989. The most striking development is the steady decline in the share of state budgets devoted to education at all levels, public assistance and transportation. Conversely, corrections and Medicaid spending increased. There was substantial growth in corrections spending during the decade, peaking in 1999 and then falling back to the early 1990s level. But the most striking development is the rapid growth in state spending for Medicaid. In 1990, state spending on Medicaid surpassed higher education as the second largest expenditure item and by 2003, seemed poised to pass elementary and secondary education as the largest expenditure item. Mortenson (1997) describes the trends this way

Clearly, the funding priorities of state and local governments have shifted and continue to do so. Presumably, these priorities reflect the will of the voters and the changing priorities of the voters over the last 45 years. Between the mid-1950s and 1982, voters appear to have supported increased expenditure shares for higher education in state and local government budgeting. Since 1982, however, that has reversed with resources shifted from higher education to new budget priorities of medical care and corrections — and tax cuts (p. 10).

Between 1989 and the present, state spending for higher education declined from 12.0 to 10.7 percent of total state spending. This may

**Table 6.5:** Comparison of Shares of State Spending  
Fiscal 1987–2003

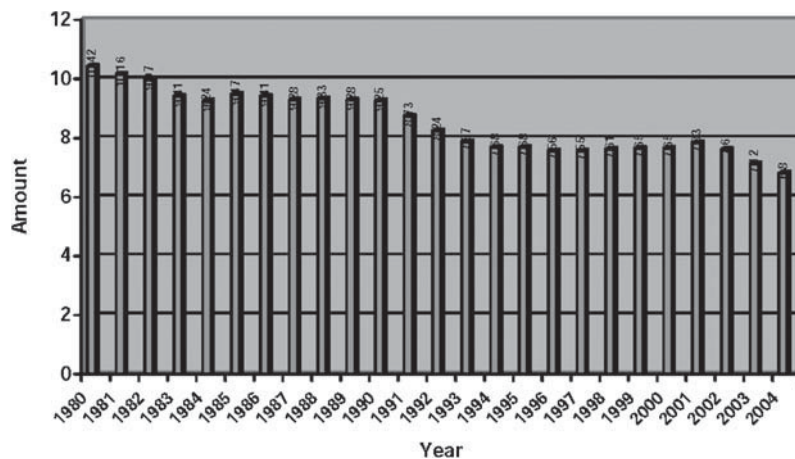
	Elementary/ Secondary Education	Higher Education	Public Assistance	Medicaid	Corrections	All Other
2003	36.0%	12.4%	2.3%	16.5%	7.0%	25.8%
2002	35.4%	12.6%	2.3%	16.0%	6.9%	26.8%
2001	35.2%	12.7%	2.3%	15.2%	6.9%	27.8%
2000	35.7%	12.8%	2.7%	14.4%	7.0%	27.6%
1999	35.7%	12.4%	2.7%	14.4%	7.0%	27.6%
1998	35.2%	13.1%	3.0%	14.8%	6.9%	27.1%
1997	34.5%	13.0%	3.6%	14.6%	6.8%	27.5%
1996	34.4%	12.9%	3.9%	14.7%	6.9%	26.8%
1995	33.3%	12.9%	4.4%	14.4%	6.7%	28.1%
1994	33.9%	13.0%	4.9%	14.2%	6.2%	27.9%
1993	34.8%	13.1%	5.1%	13.3%	5.7%	28.1%
1992	34.0%	13.5%	5.1%	12.1%	5.6%	29.6%
1991	33.4%	14.1%	5.3%	10.5%	5.7%	31.0%
1990	33.5%	14.6%	4.9%	9.5%	5.5%	32.1%
1989	34.6%	15.2%	5.0%	9.0%	5.3%	31.0%
1987	34.5%	15.5%	5.1%	8.7%	5.2%	31.0%

Source: National Association of State Budget Officers (2003)

seem like a relatively small decline. But total state expenditures were in excess of \$1 trillion in 2003. That 10.7 percent share represents \$107 billion in annual spending. To increase that to the 1989 level of 12 percent, states would need to increase their overall spending by \$13 billion.

One measure commonly used to examine trends in state support for higher education is state appropriations for higher education as a percent of \$1,000 in personal income. Figure 6.3 shows state appropriations for higher education per \$1,000 of personal income between 1980 and 2004. Appropriations increase when state economies are good and state budgets are growing. They decline as state economies worsen. But the overall downward trend is unmistakable. As recently as 1980, states appropriated \$10.56 of state tax funds to higher education for every \$1,000 in personal income. In 2002, that level had dropped to \$7.35. This was the weakest level of state investment since 1967 and represents a continuation of a trend that began in the late 1970s. Today, this steady state decline represents an almost insurmountable problem for public college budgets. Kane and Orszag (2003) estimate that since personal

**Figure 6.3:** Appropriations of State Tax Funds for Operating Expenses of Higher Education per \$1000 of Personal Income FY 1980 to FY 2004



income is now more than \$14 trillion, it would take an increase of \$14 billion in additional state appropriations to higher education simply to return to the level of state support experienced in 1977. Yet, all evidence points to further decreases in state support rather than increases of any level, let alone those in the multi-billion dollar range.

#### WHY HAVE STATES REDUCED SUPPORT TO HIGHER EDUCATION

As states experience growing budget problems, the appropriation to higher education stands out as the logical place to cut. This was often not because of dissatisfaction with the performance of the colleges. Many policymakers were well aware that the cuts would be painful to campus budgets and require them to raise tuition. But public colleges had a mechanism to raise new revenue to replace the funds lost to state cuts. A member of the Ohio House of Representatives explained that, "It was easier to cut something that could be replaced. When we made the budget cuts, we really felt that we were not hurting higher education" (Mathesian, 1995, p. 23). Thus, from the perspective of a state, higher education could be cut, without being forced to eliminate programs, or even reduce staff. Indeed, cutting the appropriations to public colleges and universities was seen as quite different from cuts to corrections, transportation, or other agencies that had nowhere else to turn to secure replacement revenues (Mumper, 2001).

Clearly, as states experience revenue shortfalls, higher education seems an especially appealing target for spending reductions. But why

have states been so aggressive in seeking such cuts? The answer is that during the last two decades, state governments have found themselves in a kind of perpetual fiscal squeeze. Two factors seem most directly responsible for driving the state budget problems and in turn, force states to reduce their support for higher education. The first is the ups and downs of the business cycle. The second is the dramatic increase in state spending for Medicaid.

All states except Vermont are required by law to balance their budget each year. These requirements force state policymakers to reduce expenditures and reduce taxes during an economic turndown. Typically states cut back on programs during a downturn and then expand them during the subsequent recovery. Higher education has historically been among the most cyclical of state expenditures. As the economy entered a recession in the early 1980s, for example, appropriations declined in real terms. Then, during the recovery of the mid-1980s, appropriations recovered to pre-recession levels. This cyclical pattern is similar to the one that had been evident in previous business cycles (Callan, 2002)

That trend appears to have changed during the business cycle of the 1990s. As the economy entered the recession in the early 1990s, real appropriations per capita declined, just as it had in previous recessions. But then during the boom of the 1990s, appropriations for higher education recovered only very slowly, and higher education spending did not exceed pre-recession levels until 1999. Indeed, as the state economies grew in the 1990s, policymakers in many states chose to cut taxes and undertake new spending in other areas (Boyd, 2002). As a result, state support for higher education failed to recover as state economies recovered. This created an especially severe problem as the next decade began. Public higher education had only recently recovered from the previous downturn when the new one began.

One of the most important factors driving the state budget problems of recent years is the escalating costs of Medicaid. Medicaid provides medical assistance to the low-income elderly and disabled, as well as to low-income families and pregnant women. Medicaid costs to the states rose rapidly in the late 1980s and early 1990s, reflecting both expanded program eligibility and increases in costs per enrollee (Kane and Orszag, 2003, p. 2). Medicaid is a means tested entitlement program funded jointly by the states and the federal government. It provides medical insurance for about 47 million low-income Americans. Of all Medicaid beneficiaries, about 25 percent are elderly and disabled. The remaining 75 percent are children and non-disabled adults. Yet, the elderly receive

nearly 75 percent of all Medicaid spending while children and the non-disabled account for only 25 percent (National Association of State Budget Officers 2003, p. 1).

As recently as 1980, when measured in 2003 dollars, states spent only about \$25 billion on Medicaid. This represented only less than 10 percent of total state spending. By 1990, state Medicaid spending had increased to \$45 billion or 12.5 percent of total spending. By 2000, spending had more than doubled to \$95 billion — nearly 20 percent of total state spending. By 2003, spending had accelerated to \$122 billion and the rate of increase in clearly accelerating (National Association of State Budget Officers 2003, pp. 4–5). The increasing costs of Medicaid are driven primarily by two factors: increases in the number of Medicaid recipients and the increased costs of prescription drugs. Between 2000 and 2003, the number of Medicaid recipients increased by nearly 15 percent. The cost of outpatient prescription drugs increased an average of 18 percent a year during those three years (National Association of State Budget Officers, 2003).

The relationship between these increases in Medicaid spending and public college tuition inflation is clear. In a recent examination of the link between the two, Kane and Orszag (2003) find that

Econometric analysis based on variations in Medicaid and higher education spending across the states and time suggests that each new dollar in Medicaid spending crowds out higher education appropriations by about six to seven cents. To put these figures in perspective, note that real state Medicaid spending per capita increased from roughly \$125 in 1988 to roughly \$245 in 1998. Over the same period of time, real higher education appropriations per capita declined from \$185 to \$175. According to our estimates, the predicted effect of the increase in Medicare spending would be a reduction in higher education appropriations per capita of about \$8. Therefore, Medicaid spending appears to explain the vast majority of the \$10 decline in higher education appropriations per capita (p. 3).

They conclude that

The bottom line is that there is a strong negative relationship between higher education appropriations and Medicaid spending. The substantial increases in Medicaid spending during the 1980s and early 1990s, appear to have played an important role in the failure of higher education appropriations to rise significantly during the 1990s boom (p. 4).

These trends make clear that whenever states have budget difficulties, it is bad news for public higher education. Whether it is the short-term impact of the business cycle, or the emergence of acute problems like Medicaid spending, states pass on their revenue shortages to their public colleges. In previous periods, state support tended to bounce back quickly after a recession, and states were able to address their acute problems in reasonable time periods. But the current experience calls into question the longer pattern of state support. In the most recent recession, state support took many years to rebound. Similarly, the Medicaid problem is even more severe today than it was a decade ago and no solution is in sight. If states are no longer willing to finance higher education at current service levels, further tuition inflation seems inevitable.

#### THE FUTURE OF STATE SUPPORT: LONG TERM STRUCTURAL IMBALANCE

What we have described so far are a series of external forces that caused state governments to reduce their support for public higher education. This declining support forced colleges to shift a larger portion of the costs of higher education from taxpayers to students and families. A number of analysts have examined whether this pattern of declining state support is likely to continue in the years ahead (Hovey, 1999; Boyd, 2002; Callan, 2002). These studies paint a chilling picture of the future of state support for public higher education. This is because they conclude that states will continue to experience rapid growth in other areas such as Medicaid and corrections, and that enrollment in public higher education are almost certain to grow in the next decade. This combination means that

The percentage of state funding devoted to higher education will need to increase annually in order for higher education just to maintain current services. Since the percentage of the state budget dedicated to higher education has actually declined over the past decade, continuing to fund current service levels for higher education would represent a significant shift in state budget trends (Hovey 1999, p. vii).

Every indication is that the severe fiscal problems states face in funding higher education are only partially related to the current economic situation. States are also facing long-term structural problems that will make it increasingly difficult to maintain present levels of support

for higher education. There are two primary reasons for this difficulty. First, in the 1990s, state revenue growth was fueled by dramatic increases in tax revenue from capital gains. The growth in the stock market that drove these revenue increases is unlikely to continue. Second, the increased volume of internet sales is likely to drive down state sales tax revenues. A 2002 study by Don Boyd of the National Center for Higher Education Management Systems estimates that within eight years, state governments are likely to face budget shortfalls of 3.4 percent of total revenue. A total of 44 states face revenue shortfalls, and 12 others face gaps in excess of 5 percent of total revenue. In combination, these factors will hold down state revenue. At the same time, programs like Medicaid will demand a larger share of available revenue. This is almost certain to crowd out spending for higher education.

In addition to these revenue difficulties, enrollments are likely to grow in ways that will require new spending in order for states to maintain sufficient access to public colleges for their citizens. In the 1960s and 1970s, the baby-boom generation attended college in remarkably large numbers. In order to accommodate this enrollment growth, new campuses were opened and expansions took place at virtually all existing campuses. Today, another tidal wave of college enrollment is on the way. In 1988, there were more than 4 million births in the United States. That was the highest number since 1964. This baby-boom echo generation is crowding elementary and secondary schools, and they are now on the verge of going to college (Carnevale and Fry, 2002). Between 2002 and 2012, college enrollment is projected to increase by 15.6 percent (National Center for Educational Statistics, 2003a).

Some of the reasons for this increase are obvious. The National Center for Education Statistics projects that public high school graduates will increase by more than 10 percent between now and 2012 (National Center for Educational Statistics, 2003b). The college continuation rates of recent high school graduates are now 64 percent, up 59 percent from a decade ago. That means more students are graduating from high school, and a higher percentage of them are going on to college.

But this is by no means the only factor driving the enrollment surge. A recent report identifies three other factors that seem destined to crowd our colleges in the next decades (Carnevale and Fry, 2002). The first is immigration. Since the 1980s, 800,000 immigrants have come to the U.S. every year. This has already changed the character of elementary and secondary education. As recently as 1990, about 15 percent of all school-age children will be the children of immigrants. By 2010, it will have increased to 22 percent. Second, the changing labor market will



force many workers to return to school to add to their skills. These new college students might be looking for mid-career advancement, education, preparing for a career change, or retooling after a lay-off. The federal Hope and Lifelong Learning tax credits will make returning to college even more affordable to many Americans. Finally, better academic preparation among high school graduates will mean that more of them are prepared for college than at any time in the past. Comparing academic readiness is always difficult. But most empirical evidence suggests that student achievement levels have been rising over the last 30 years. In explaining this trend, Carnevale and Fry (2000) point out

Rising scores do not necessarily imply that our schools are performing better, however. The apparent rise in cognitive skills could reflect improvements in other areas such as better preparation or higher family income (p. 15).

Regardless of the reason for the improvement, better prepared students will head to college in larger numbers and move toward graduation at higher rates.

These factors leave little doubt that the next decade will bring an influx of new students hoping to enroll in public colleges that are already operating close to capacity. Exacerbating these trends is the fact that states will not have, or are not willing to spend, the funds to build or expand the physical capacity of their public colleges. The enrollment surges brought on by the G.I. Bill and the baby-boom each produced an enormous expansion in the number of campuses in the country and the capacity of those campuses. In the decades ahead, however, states are simply not going to be able to add capacity in that way.

As a consequence, many states face a long-term structural problem with regard to higher education. In the years ahead, it is unlikely that there will be sufficient revenue to fund all programs at current service levels. Especially during recession years, there will be constant pressures for spending reductions and few available resources for new initiatives. Demands for more state Medicaid spending will further reduce available funds. As the ongoing fiscal crisis unfolds, an ever larger number of citizens seek to enter public colleges. To maintain present tuition and fee levels, states will need to locate substantial new revenue. A more likely consequence is that states will continue to reduce their support for higher education, to shift a larger share of those dollars on programs to aid middle income students, and fuel an acceleration of public college tuition inflation lasting well into the next decade.

**Table 6.6:** Current Fund Expenditures per FTE Equivalent Student in Degree Granting Institution Public Institutions by Type (in constant 1999–00 Dollars)

	Four Year Institutions	Two Year Institutions
1980–81	\$19,138	\$7,023
1985–86	\$20,839	\$7,676
1990–91	\$21,505	\$7,656
1995–96	\$23,432	\$8,217
1999–00	\$25,256	\$8,924

Source: U.S. Department of Education (2002, p. 388).

### CHANGES IN CAMPUS EXPENDITURES

There is much more to the story of public college tuition inflation than simply changes in campus revenues and state budgets. Colleges are also spending those revenues in different ways than they did two decades ago. Table 6.6 shows the overall per student expenditures by public colleges from 1980–81 to 1999–00. In real terms, public four-year institutions spend more than \$25,000 per student each year. This is an increase of about 50 percent since 1980–81. At public two-year colleges, annual per student spending was just under \$9,000. This was a 27 percent increase over 20 years (National Center for Education Statistics 2004b). While these spending increases are well below the rate of tuition inflation, they represent a substantial increase in the amount that institutions are paying to provide a college education.

Campuses are not only spending more per student, they are spending those dollars in different ways. Table 6.7 shows the changes in the percent distribution of educational and general expenditures. Public institutions reduced the share of these expenditures devoted to instruction from 38.5 percent to 34.0 percent of their educational and general expenditures. This represents a substantial redirection of campus spending away from instruction and toward other areas. Seen another way, in 1999–00, public institutions would need to spend an additional \$4 billion on instruction simply to return to the 1980–81 spending share. The share of total spending directed to the operation and maintenance of the physical plant also declined by a substantial amount.

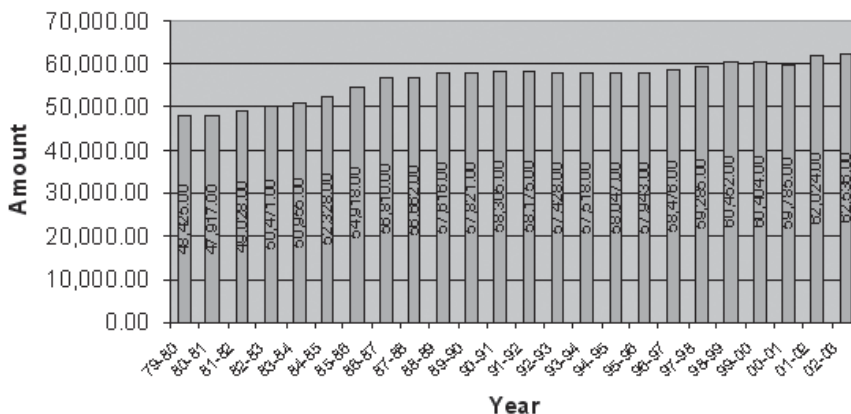
At the same time, the share of expenditures on research, public service, student services, institutional support, and scholarships all increased steadily over the 20-year period. In real terms, the amount

**Table 6.7:** Percent Distribution of Current Fund Expenditures on Educational and General Expenditures of Public Degree Granting Institutions by Purpose 1980–2000

	1980–81	1985–86	1990–91	1995–96	1999–00
Instruction	38.5%	37.7%	36.6%	35.3%	34.0%
Research	19.7%	19.7%	21.7%	21.8%	22.4%
Public Service	8.3%	8.0%	8.2%	8.2%	8.4%
Administration	12.9%	13.9%	13.7%	13.7%	14.1%
Student Services	3.8%	3.7%	3.6%	3.8%	3.8%
Operation of Plant	9.1%	8.8%	8.2%	8.2%	6.5%
Scholarships	3.5%	3.8%	4.5%	5.9%	6.5%
All Other	4.2%	4.4%	2.2%	1.6%	4.3%

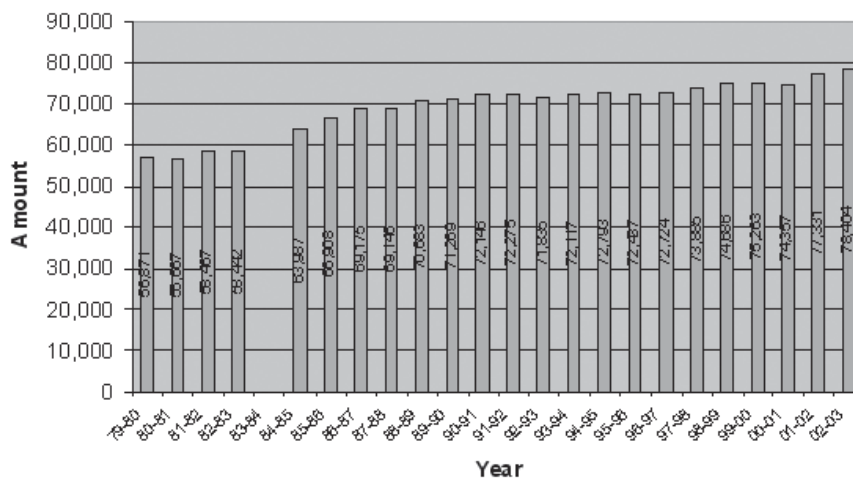
Source: U.S. Department of Education (2002, p. 393).

**Figure 6.4:** Average Salary at Public Institutions 2002  
Constant Dollars



spent on research doubled, from \$8 billion to \$16 billion. Spending on scholarships, in real terms, increased even more rapidly. In 1980, real spending by public institutions on scholarships and fellowships was \$2.4 billion. In 2000, it had increased to \$6.8 billion.

Not all changes in campus spending patterns can be seen in these tables. One area where spending has increased is faculty salaries and benefits. Figure 6.4 traces the increase in average faculty salaries at public colleges since 1980. It shows that, for all ranks and types of institutions, these salaries have increased by 30 percent in real dollars. Interestingly, these increases occurred disproportionately in the mid-1980s and the

**Figure 6.5:** Average Compensation at Public Institutions in Constant 2002 Dollars

late 1990s and early 21st Century. When state economies are poor, increases in faculty salaries are low. But as those economies improve, salaries spike upward. Later, as state economies slide into the next recession, they must continue to pay those higher salaries.

When the full costs of faculty compensation are considered, the impact on public college expenditures is brought into even greater focus. Figure 6.5 shows that in 1980–81, the average faculty salary at a public institution was \$47,917. Institutions paid an additional \$8,750 per person in benefits — including health insurance and pension payments. By 2002–03, the average faculty salary had increased to \$62,536. But institutions paid an additional \$15,868 per person in benefits. Much of this increase is accounted for by the spiraling costs associated with providing health insurance for faculties and their families. Thus, the rapid rise in health care costs has had a double impact on tuition inflation. Rising Medicaid expenditures significantly reduced the dollars that states have available to support higher education. Then campuses were forced to direct a larger portion of their already reduced funds to pay for the increased health care costs.

An additional area of spending growth for public colleges is technology. There is no doubt that colleges are now spending more on technology and that at least a portion of these costs are passed on to students in the form of higher tuition. Since this spending has occurred across all campus activities and by virtually every unit on campus, its

full impact is difficult to isolate. In describing his experiences at Cornell, Ronald Ehrenberg (2000) observes:

If the price of computer power is falling, why are information technology costs at the university rising so rapidly? One reason is that the shift to networks, the Web, and a client/server computing system based heavily on personal computers and individual work sites has multiplied the number of staff needed to support the use of information technology at the university. When I came to Cornell in 1974, my college had one computer/statistical consultant on its staff to support all academic and administrative computing. Now, with a student body and faculty unchanged in size, the college has ten professionals and many part-time student employees in the information technology area. The functions they perform include maintaining and supervising networks, networked computer labs, creating and maintaining web pages for the college, responding to problems that individual faculty members have with their computers and printers, helping professors prepare on-line material for classes, and answering students' question (p. 189).

While this observation was made about an elite private institution, the very same developments are evident at every public four-year college in the nation and in the vast majority of public two-year colleges.

When considering the impact of increased technology spending on tuition inflation, the National Commission on the Cost of Higher Education (1998) concluded

Institutions must provide equipment for faculty and students as well as the infrastructure to accommodate it. Given the age of many campus buildings, and the state of the infrastructure to support this equipment, this expense is substantial (p. 11).

They go on to say that those "increasing costs for technology almost certainly translate into higher prices charged to students" (p. 11).

Still another area of increased campus spending is in improving the decaying physical plant. These problems, no doubt exacerbated by years of deferred maintenance and repairs, have presented colleges with an increasing cost simply to keep their programs operating. A National Science Foundation (1996) survey of scientific and engineering research facilities estimated the deferred maintenance costs to replace or repair these facilities at \$9.3 billion. Another recent report placed the total cost of deferred maintenance at the nation's colleges at \$26 billion (Kaiser, 1996). In addition to these on-going repairs and renovations, institutions face the extra costs of improving the quality of that infrastructure. As the National Commission on the Cost of Higher Education (1998) put it

Thus, not only are many college and university buildings and laboratories old and outdated in terms of computer wiring and other infrastructure needs, but they are also struggling to maintain quality information access within the walls of these buildings on our nation's campuses (p. 265).

In sum, campus expenditures certainly play a role in fueling public college tuition inflation. These institutions are spending more per student than they ever have and are passing that increase along in the form of higher tuition. Campuses are spending more on research and public service. They are also spending a smaller portion of their budgets on instruction. At the heart of these changes are increasing costs for compensation, technology, and facilities.

#### IS ALL THIS NEW SPENDING NECESSARY?

There is no doubt that public colleges are spending more per student than they ever have, and that they are passing a portion of the costs of these increases on to their students in the form of higher tuition. Whether or not these expenditures are justified remains a source of great dispute. State policymakers often urge campuses to limit spending and focus their attention on instruction and economic development activities. A recent Congressional committee concluded its deliberations with this concern

This Commission finds itself in the discomfiting position of acknowledging that the nation's academic institutions, justly renowned for their ability to analyze practically every other major economic activity in the United States, have not devoted similar analytic resources to their own internal financial structures. Blessed, until recently, with sufficient resources that allowed questions costs and internal cross-subsidies to be avoided, academic institutions now find themselves confronting hard questions about whether their spending patterns match their priorities and about how to communicate the choices they have made to the public (Boehner and McKeon, 2003, p. 5).

Discussions over the real costs associated with providing a public higher education often becomes bogged down in disagreements about terminology. Specifically, there is no agreement on what constitutes a price and a cost. The National Commission on the Cost of Higher Education (1998) described the relationship between the two terms as "opaque" (p. 12), and goes on to complain that

The terms of analysis used by different parties are not always consistently defined; institutional costs and student costs are two different things, prices and costs are not the same, and prices charged and prices paid often bear very little relationship to each other. The persistent blurring of terms (both within and beyond higher education) contributes to system-wide difficulties in clarifying the relationship between cost and quality; defining the difference between price and cost; distinguishing between what institutions charge and what students pay; and ultimately to systemic difficulties in controlling costs and prices (pp. 14–15).

These differences in terminology reflect the different viewpoints of the policymakers. When a campus invests in new technology or adds an expensive new program, it sees the resulting expenditures as a necessary part of the costs of their operation. Similarly, when the price of health insurance for faculty and staff increases, campus leaders see this as an uncontrollable cost to the campus. They absorb these expenses as costs of operations and often pass them on to their students indirectly as higher prices.

Decisions about where and when to make new expenditures can seem quite arbitrary to state policy makers. They wonder if the new programs were necessary, if the expensive new technology is really necessary at every campus, and if the current faculty could not be made more productive rather than requiring that new faculty members be hired. Indeed, looked at in one way, tuition inflation may simply reflect the rising prices of the goods and services purchased by campus leaders. But looked at in another way, increased campus expenditures are not really a cause at all. Simply because college leaders chose to increase their spending does not mean that those increases are necessary or justified. Sowell (1992) makes the point that when “a college expends its range of resources first, and then calls it ‘increased costs’ later, this tends to . . . erode the very concept of living within one’s means” (p. 24). He goes on

When parents are being asked to draw on the equity in their home to pay rising tuition, it is not simply to cover the increased costs of educating their children, but also to underwrite the many new boondoggles thought up by faculty and administration, operating with little sense of financial constraints (p. 24).

The view that colleges do not always spend their money in appropriate ways is not restricted to conservative political commentators. A survey of state legislators revealed that “many believe that higher education does not spend its money wisely, and that tuition increases could

be avoided if colleges realigned their spending with those areas the public most cares about, especially undergraduate education and job preparation” (Ruppert, 1996). Similarly, in a survey by the Education Commission of the States (1998), 68 percent of the Chairs of Education Committees in State Legislatures, “feel strongly that colleges and universities should focus more of their attention on undergraduate education as the core of their enterprise” (p. 14). This report quotes one committee chair who summed up this view, “In times of decreased financial support, we should put the money where it serves the greatest number of people, and that is basic core education” (p. 14).

Public colleges have been quick to respond that these spending increases are essential to maintaining the quality of these programs and institutions. These were not frivolous new expenditures, but necessary investments required to hire and retain the top faculty, to provide students with the newest facilities, and to keep pace with the private colleges. The view that rising college costs are driven primarily by the high costs associated with providing a high quality education was clearly laid out in the *New York Times* by Charles Kiesler (1993). He argued that policies to control college prices are based on a misunderstanding of the problem of college costs. Indeed, “most law makers and policymakers are misled by standards of measure that betray an inadequate grasp of the financial challenges we face, especially at major research universities” (p. A19). This is because the Consumer Price Index and the Higher Education Price Index, the most common measures of the costs facing colleges, present a distorted picture. In his view, both of these measures “dramatically underestimate the institutions true cost of doing business — costs over which the institutions often have no control” (p. A19). Seen this way, the causes of the problem are simple, even if they are often misunderstood. It was the increasing costs of a quality higher education that have caused college prices to rise. As operating expenditures for colleges increased, tuition was increased as those higher costs were passed along to students. The quality of higher education can only be maintained at the expense of higher college prices. In this view, what good is gaining access to a public college if the quality of that institution has been significantly compromised in order to expand that access?

#### THE CONSEQUENCES OF PUBLIC COLLEGE TUITION INFLATION

The fact that college prices have increased is beyond dispute. But whether these increases have produced serious negative consequences is



less obvious. The U.S. is now well into its third decade in which public college tuition has increased faster than overall inflation and family incomes. In fact, rising college prices have been a source of Congressional concerns since at least 1978. Yet, through this entire period, public college enrollment has continued to grow. When tuition inflation is slow, public college enrollments increase. As tuition inflation accelerates, enrollments seem to accelerate as well. This has led some to conclude that rising prices may not be having the widely assumed negative impact on college access.

In this section, we consider several of the consequences of rising public college prices. The focus is particularly on the consequences for low-income students. First, we examine changes in the federal and state student financial aid programs that are designed to help low-income families pay the costs of college. Recent changes in these programs have reduced their value to the neediest students and left them even more vulnerable to the effects of tuition inflation. Second, we examine the link between college prices and college participation. We do this by looking at the impact that price seems to have at each stage of the college-going process. Finally, we consider the impact that rising prices have had on the institutions themselves. As we will show, state and institutional efforts to control prices have led to revenue shortages that have made it difficult for public colleges to compete with private institutions.

#### TUITION INFLATION, FINANCIAL AID AND PUBLIC COLLEGE AFFORDABILITY

The fact that public college prices are increasing rapidly is not the same as saying that college is becoming less affordable. Affordability also considers the resources that potential consumers have to purchase the product. In an earlier section we showed that family income has increased at widely differential rates across the distribution. The slow rates of growth among the families at the bottom have raised special concerns about tuition inflation. But income is not the only resource available to families to pay for college. The federal and state governments have long operated need-based financial aid systems to insure that low-income and disadvantaged families are able to afford higher education. If these programs had increased sufficiently, the impact of rising prices and stable incomes on college access for the disadvantaged might have been mitigated. Unfortunately, at precisely the time when there has been the greatest

**Table 6.8:** Maximum Pell Grant as Percent of Average Cost of Attendance at a Four Year Public Institution  
Selected Years 1980–2002 (in constant 2002 dollars)

Year	Maximum Pell Grant	Average Pell Grant	Maximum Pell Grant as Percent of Average Cost of Attendance at a Four Year Public Institution
1980	\$3,634	\$1,831	67.1%
1985	\$3,471	\$2,114	54.2%
1990	\$3,089	\$1,946	44.3%
1995	\$2,724	\$1,764	34.7%
2000	\$3,785	\$2,096	45.0%
2002	\$4,000	\$2,415	40.3%

Source: King (2003, p. 28).

need for redistributive financial aid programs, they have been changed in ways that make them less valuable to needy families (Spencer, 2002).

#### THE DECLINING VALUE OF THE PELL GRANT

Since 1965, what is now the Pell Grant program has been the primary policy mechanism to reduce the price barriers to college facing lower-income students. The Pell grant is a means tested federal program that, in 2002, awarded more than \$11 billion to low-income students to cover the cost of higher education. Unfortunately, over the past 25 years, the purchasing power of the Pell Grant has not kept up with public college tuition inflation. The maximum Pell Grant is awarded to the student with the greatest financial need. As shown in Table 6.8, such a student in 1980 would be eligible to receive a grant equal to 67 percent of the annual price of attending a four year public institution. By 1995, the value of the grant had declined to less than 35 percent of the annual cost of attendance. During the late 1990s, as tuition inflation moderated and federal Pell grant spending increased, the value of the maximum grant was restored to 45 percent. But the recession of the early 2000s drove the value downward again.

The declining purchasing power of the Pell grant has left low-income students with a difficult choice (King, 2003). Federal grant aid now regularly leaves this student with substantial unmet need as they consider how to pay for college. They can choose not to attend and thus fail to reap the economic benefits of a college degree. They can attend

part-time and put off those benefits. They can attend a less expensive two-year institution and, as we will discuss later, reduce their chances of earning a bachelor's degree. Or they can borrow the money and risk the resulting post-graduation debt.

#### A NEW GENERATION OF STUDENT ASSISTANCE PROGRAMS

During the 1990s, in the face of rising tuition and the Pell Grant and other need-based financial aid, state and federal policymakers undertook a major effort to overhaul the way the government provides financial aid to college students. They did not eliminate or restructure the existing need-based aid programs. Rather, they constructed a new, parallel system of student support based on very different principles. Over the next several decades, these new programs are poised to grow much faster than the need-based student aid programs. This will not happen through a direct replacement, but a slower process in which all new funds are directed to the new programs as the value of the need-based aid programs continues to erode (Gladieux, 2002). The result is that student aid will no longer serve to offset the impact of tuition inflation on low-income and disadvantaged students as it has in the past.

These new programs are designed to make college more affordable to middle and upper-income students. This is a noble goal, but realizing it seems likely to come at the cost of access for the low-income. The programs that best exemplify this new approach to college finance are the federal HOPE scholarship and Lifelong Learning tax credit and the various state-level merit scholarship programs modeled after Georgia's HOPE scholarship. The Federal HOPE Scholarship was loosely based on the Georgia program. While the federal program operates differently, it retains the same name given to Georgia's program by then Governor Zell Miller.

The Taxpayer Relief Act of 1997 created a number of new programs designed to help families pay for college. These included the federal HOPE Scholarship, the Lifelong Learning credit, a student loan interest deduction, and an expansion of education IRAs (Wolanin, 2001). The HOPE Scholarship and Lifelong Learning credit, by far the largest of the initiatives, allow students to obtain credits that reduce their federal tax liability. They are designed to provide relief for those students who are already going to college rather than providing an incentive for others to attend. Also, unlike the need-based federal programs, the HOPE scholarship and Lifelong Learning credit were not designed to target benefits to the most needy. Instead

These two new programs are targeted toward students and families who generally are not eligible for need based grants but still need financial assistance to meet all of their expenses. The tax credit programs include income caps to prevent upper income students from qualifying for benefits while providing relief to middle income students. But they do relatively little to aid low-income students, most of whom have no tax liability, and, therefore will not be eligible for the credit (Hoblitzell and Smith, 2001, pp. 1–2).

These programs carry a substantial cost, but it must be measured in foregone revenues rather than direct expenditures. The estimated cost of these new higher education tax credit programs is \$41 billion over their first five years (Kane, 1999). This is roughly the same size as the Pell grant program, and it is almost certain to grow during the next decade as more eligible students use the tax credit and institutions begin to set prices so that students can take full advantage of the program benefits.

The vast majority of these tax credits go to middle- and upper middle-income students. Disadvantaged families, who pay little or no tax, are less likely to be aware of the tax credit and are more likely to attend lower-priced community colleges. The benefits of the tax credit are directed toward families with annual incomes between \$80,000 and \$160,000 (Kane, 1999). This is far above the eligibility for the Pell grant that usually is awarded to only those with taxable incomes below \$40,000. Thus the HOPE credit represents a new type of targeting in which the most-needy are left out entirely and awards are carefully targeted to the politically powerful middle- and upper-income families (Wolanin, 2001). The result is a not so subtle redistribution of benefits to families higher up the income ladder. In annual appropriations battles the funds for Pell grants must come out of federal revenues that have already been reduced by revenues lost to the HOPE credits. Given these patterns, it seems certain that the federal government will continue to spend more on these tax expenditure programs (as well as the various student loan programs), and it will have little positive impact on the college access available to disadvantaged students and their families.

State governments also made policy changes in the 1990s to address the problem of tuition inflation (Heller, 2002). The fastest growing state initiatives in this regard are merit scholarships modeled on the popular HOPE Scholarship program in Georgia. These merit programs offer full or partial scholarships to all graduates of a state high school who earn a specified GPA and attend an in-state public college or university. On its face, such programs seem like an ideal way for states to encourage

and reward academic achievement without regard for the student's racial or economic status. In practice, however, the early evidence is that, like the federal tax credits, these merit aid programs direct a large portion of funds to middle- and upper-income students. Lower-income students are less likely to meet the minimum GPA, less likely to maintain it through college, and more likely to attend less expensive institutions.

Since 1990, thirteen states have established new merit scholarship programs and eight more operate programs that have a merit component (National Association of State Student Grant & Aid Programs, 2001). While these programs vary in their structure, funding source, and eligibility criteria, all ignore the student's family income. The dollar growth of these merit programs is especially noteworthy.

At the state level, new grant aid has shifted steadily in favor of merit based aid and against need based aid. Since 1993, funding of merit programs has increased by 336 percent in real dollars. During the same time period, funding for need-based financial aid programs had increased only 88 percent, which reflects the broad political appeal and support for these programs (Advisory Committee on Student Financial Assistance, 2001, p. 8).

Today, more than \$900 million, or 23 percent of total state grants, are awarded as merit scholarships, up from 10 percent in 1991 (National Association of State Student Grant & Aid Programs, 1991; 2001). While these merit scholarship programs seem to be designed to appeal to all families, only those students who meet the requisite grade or test requirements earn the award. In most programs, the student must also maintain a predetermined GPA to keep the scholarship. In practice this has meant that a far higher percent of upper- and middle-income students receive the award. Lower-income and minority students, who often come from lower performing high schools, receive these scholarships in much smaller percentages.

In his testimony before the Advisory Committee on Student Financial Assistance, Heller (2003) lamented this trend.

There is no question that the focus of state scholarship programs is moving away from serving needy students. While the bulk of the state dollars spent for financial aid is still in need-based programs, virtually all of the new initiatives have been geared towards merit scholarship programs. And evidence is becoming available that merit scholarship programs do little to serve needy students, but rather, are addressed at the political interests of middle and upper income students and their families (p. 3).

The emergence of this new generation of federal and state student aid programs has helped to undermine the goal of equal opportunity that characterized the Title IV student aid programs. These are explicitly not need-based programs. Instead, they are designed to make higher education more affordable to middle- and even upper-income families. There is substantial evidence that these programs are creating a future in which government spending on student aid is unlikely to help low-income and disadvantaged students compensate for the rapid tuition inflation.

Despite these design problems, the politics of these new generation programs almost guarantees that they will expand. As tuition inflation increases, there will be enormous pressure on policymakers to insure that the value of the tax credits keeps pace with those increases. Similarly, state merit scholarship programs will cost states more each year as tuition increases and this will bring enormous pressure to maintain the program in their present structure. One commentator described it this way

The biggest problem with the scholarships may be simply that the public loves them too much. College officials and lawmakers alike complain that the merit programs have become so popular that they are impossible to change. For some state policy makers, the scholarships are becoming to middle-class parents what Social Security is to an older generation (Selingo, 2001, p. A20).

The Executive Director of the New Mexico Commission on Higher Education echoed these concerns with their merit program when he said, "If it isn't an entitlement yet, in folks' minds then it is getting pretty close." A Georgia State Representative put it this way, "It's less painful to jump off a cliff than to change HOPE" (in Selingo, 2001, p. A20).

As the tax credit programs are more widely understood and institutionalized, and the merit scholarship model migrates to other states, their cost will mushroom. It is almost inevitable that they will attract a larger and larger portion of the government spending on higher education which will, in turn, accelerate public college tuition inflation. Attempts to restrain the growth of these new programs are likely to mobilize their vast numbers of middle-income supporters. Redistributing state funds out of these popular programs and back to the kind of institutional support that will slow tuition inflation will not be easy. And, it will only become more difficult as a generation of middle- and upper-income families build their children's college funds on the assumption that these benefits will always be there.

## THE CONSEQUENCES OF PUBLIC COLLEGE TUITION INFLATION FOR LOW-INCOME AND DISADVANTAGED STUDENTS

As public college tuition increases, household income remains stable, and the value of student financial aid is diminished, families often struggle to figure out ways to pay these higher prices. This is a problem for all families, but especially those with the fewest resources. Low-income and disadvantaged families are less likely to have sufficient savings for college than their higher-income counterparts. They are also often less willing to take out loans for college. This is only reasonable since their chances of success in college are uncertain and the economic rewards of graduation difficult to predict. Consequently, there is reason for concern that rising college prices will diminish the opportunities available to low-income students to attend a public college.

Talented young people from low-income families often choose not to go on to higher education. According to the Advisory Committee on Student Financial Assistance (2002), during the first decade of the 21st Century, nearly 2 million low-income students, who are qualified to attend college, will not. One factor underlying this troubling situation is public college tuition inflation. Indeed, there is strong evidence that rising prices have a chilling impact on the enrollment of low-income students in many different ways. In the following section, we review recent research examining the impact that college prices have on the aspirations of students from low-income families to attend college, on the type of college they choose to attend, on their chances to graduate, and on their level of post-graduation debt. Finally, we will review the financial nexus model developed by Edward St John and Michael Paulsen. This model reveals the central role that price plays in the decision of whether or not to attend college.

### PRICE AND COLLEGE PARTICIPATION

Nearly everyone agrees that price is an important factor in determining whether a student will enroll and persist in college. Its impact is especially powerful on students from low-income families. Research on this relationship has focused on determining the responsiveness of different students to changes in tuition or subsidy patterns (Paulsen, 1998). Leslie and Brinkman (1988) conducted a groundbreaking meta-analysis to provide an integrative review of the literature. Using statistical procedures to transform findings into a common metric, they standardized the

results to a student price response coefficient (SPRC) per \$100 of price change. Looking specifically at 18–24-year-old potential, first-time students, they found that students do respond to prices. As tuition increases, enrollments decrease and vice versa. The average SPRC was  $-.7$ , or for every \$100 increase in price. In other words, for every \$100 increase in tuition, there was a drop of .7 percentage points in the first-time enrollment rate among this cohort. The relationship was especially strong for low-income students.

In a follow-up study to Leslie and Brinkman, Heller (1997) confirmed the tuition sensitivity of low-income students. He found that for every \$100 tuition increase, enrollments dropped in the range of .5 to 1.0 percentage points across all types of institutions. One word of caution he provided was that this range was based on data and tuition prices from the 1970s and early 1980s. With current tuition levels, the effect would probably be even greater. Additionally, as financial aid declined so did enrollment, depending upon the type of aid awarded. Generally, enrollment was more sensitive to grant aid than to loan or work aid. Second, black students were more sensitive to tuition and aid changes than white students, while the evidence for Hispanic students was inconsistent. Finally, students in community colleges were more sensitive to tuition and aid changes than students in four-year public colleges and universities.

These studies focused on the aggregate impact of price changes on the college participation of different students. One approach conceptualizes the decision to attend college as a series of steps: aspiring to college, selecting the proper courses in high school, selecting an institution, persisting at that institution, and finally graduating. Seen this way, price has a depressing effect on the participation of low-income students at each stage of the process. A second set of studies have sought to identify the “financial nexus” underlying college participation. We explore each of these approaches below.

#### PRICE AND COLLEGE ASPIRATIONS

The first place where researchers have identified the effect of price on participation is in determining the aspirations of high school students. If students perceive that college will be beyond their financial reach, they may see little need to prepare for college. They may not select the necessary college preparatory classes, pay insufficient attention to their high school grades, and fail to gather information about college requirements or deadlines. As a result, they shut the door to college even if



they later find that they were able to cover the costs through grants or scholarships. Thus, reports of public college tuition inflation may cause fewer low-income students to aspire to college years down the road.

Hossler, Schmidt, and Vesper (1999) studied this problem by developing a model of college aspirations. Although grounded in sociological theory, there are financial considerations made by students within the aspiration model. The model has three stages. They are predisposition, search, and choice. Predisposition refers to student plans for either higher education or employment following high school graduation. The search stage happens when the students discover and evaluate the various collegiate options available to them. Here, students evaluate the characteristics and options offered by colleges and determine which are most important to them. Finally, the choice stage occurs when students choose the school from among those that were considered during the search stage. During all stages, factors such as family background, academic performance, peers, and other high school experiences influence the development of post-high school plans.

One of the most important findings of their study was the difference between the factors that influence student aspirations and those that influence student achievement. What influences a ninth-grade student's decision is quite different from what influences a senior's decision about college attendance. As students come closer to high school graduation, they learn more about higher education options and issues. Students are not interested in college costs until the senior year. At that point, the reality of the costs significantly impacts students' decisions about, not only where they will attend, but will they attend. Additionally, parental support, especially financial, was an important indicator of student responsiveness.

Similarly, a study conducted by Somers, Cofer, and VanderPutten (2002) indicated that the decision to attend any postsecondary institution was most influenced by socioeconomic status (SES) and college expense. Those students from the lowest income quartile were much less likely to attend any postsecondary education than their highest income quartile counterparts. In fact SES seems to have a cumulative effect on college enrollment that begins during the preschool years and continues throughout the secondary years. It is estimated that high SES students are four times as likely to enroll in college as low SES students. This is in part determined by parental encouragement (Hossler and Gallagher, 1987). The intersection of all these factors significantly curtails low-income student aspirations to college when the costs continue to rise. Inaccurate information about the true cost of college and financial aid

options coupled with a lack of parental encouragement or support often create a barrier to those aspiring to attend. And, there was a clear bifurcation between those who attend four-year schools versus two-year schools.

This conclusion is supported by research conducted by Advisory Committee on Student Financial Assistance (2002). They find that because of the combination of rising prices and changes in the financial aid programs, families of low-income, college qualified high school graduates face an annual unmet need of \$3,800. This requires these families to spend \$7,500 to cover the full cost of attendance at a public four-year institution. This represents two-thirds of college expenses and one third of annual family income (2002, p. v). The committee also estimated that financial barriers now prevent 48 percent of college qualified low-income high school graduates from attending a four-year college and 22 percent from attending any college at all within two years of graduation. Similarly, 43 percent of students from moderate income families are unable to attend a four-year college and 16 percent attend no college at all. The cumulative impact of all this is that each year 400,000 college qualified students will be unable to attend a four-year college and 170,000 will attend no college at all.

#### COLLEGE PRICE AND INSTITUTIONAL CHOICE

College prices also have an important impact on the type of institution a student attends. Low-income students are far more likely to attend a two-year college as opposed to a four-year college (Advisory Committee on Student Financial Assistance, 2002). The primary reasons for this are rising public college prices and the shift from need-based, or grant aid, to merit-based aid by the states and loan aid by the feds. Leslie and Brinkman (1988) and Heller (1997) confirmed that college cost increases were directly related to a decline in low-income enrollment in four-year institutions, while enrollment increased at two-year community colleges. Kane (1995) and Rouse (1994) had a similar finding that increasing low-income student enrollment at two-year public colleges was a direct reaction to the rising tuition and state appropriation reductions during the 1980s and 1990s. Clearly, lower-income students have the greatest difficulty with increasing tuition. When looking at tuition as a percentage of household income, average annual tuition at a four-year college is now twice as expensive as it is at a two-year college. It is no surprise that low-income enrollment at public two-year colleges is growing while

it is declining at public four-year institutions. Similarly, students from the most affluent families are increasing their enrollment in the most selective undergraduate institutions (National Center for Postsecondary Improvement, 1998).

There is also growing racial segregation among types of public institutions. Carter (1999), found that African-American students reported that they attend their first choice institution less often, attend institutions closer to home, and chose their institution based on lower cost than what their white counterparts reported. Finally, while there was no significant difference in the rate at which white and African-American students attend two-year versus four-year institutions, there was a significant difference between private versus public schools, higher cost versus lower cost, and larger versus smaller institutions. For all three, African-American students were on the short end of the receiving line.

It may be comforting to think that even as prices at four-year institutions increase, low-income students can always attend low-priced community colleges. Indeed, many states have consciously pursued policies to encourage low-income students to enter two-year colleges with the hope that they will then transfer to four-year institutions after earning their an associates degree. There are two problems with this approach. First, tuition and fees at these institutions are rising as well and, in many states, have already reached the point that they are unaffordable to many needy residents. Second, many potential four-year graduates stop after they complete their two-year degree.

Among traditional college age students, only 29 percent of Whites and 27 percent of Hispanics, and 20 percent of African American transfer to four year schools after completing two-year programs. This has an important impact on future earnings. While a worker with an associates degree earns 21 percent more than a high school graduate, a bachelors degree commands 31 percent more and a masters degree 35 percent more (Carnevale and Fry, 2000, p. 32).

Forcing low-income students into community colleges rather than beginning at a four-year campus, thus dramatically reduces their chances of earning a four-year degree and unnecessarily limits their life chances.

#### PRICE AND COLLEGE PERSISTENCE

Persistence, grounded in sociological theory, is the likelihood that students will reenroll in college. Historically, research has been dubious

as to the link between cost and/or financial aid and persistence (St. John, Paulsen, and Starkey, 1996). Tinto (1993) explains that finances are more likely an excuse to drop out, rather than the reason for dropping out. He states, "though departing students very often cite financial problems as reasons for their leaving, such statements are frequently *ex post facto* forms of rationalization which mask primary reasons for their withdrawal" (Tinto, 1993, p. 66). Similarly, Leslie and Brinkman (1988) noted that upperclassmen were less responsive to the price changes. They attribute this to the notion that upperclassmen have already invested in the institution and because these students would not be subject to the higher prices for as many years as first-time students.

Recently, the persistence model has been viewed through an economic lens. As such, the notion that there is no correlation between cost and persistence has been called into question. In fact, St. John, Paulsen, and Starkey (1996) note that national studies demonstrate a clear link between persistence and tuition, subsidies, financial aid, and living costs. Similarly, Heller (2000) compared different racial groups and institutional types. His findings demonstrated that for most racial groups there was a correlation between continuing students and tuition price responsiveness. For every \$1,000 increase in tuition prices, there were large decreases in enrollment.

#### POST GRADUATION DEBT

As tuition at public institutions increases, low-income families must find a way to pay those costs. Either more of the family budget must be being directed toward higher education or they must borrow money to cover the costs (Cavanagh, 2002; College Board, 2003b). With household income stable, an increasing number of low-income students have chosen to borrow, either through the many federal loan programs or through alternative loans.

There are several reasons for the increased reliance on loans. First, federal grant aid has not kept pace with tuition inflation. Second, financial need has increased even more rapidly than educational costs. Third, increases in loan limits and the ease to obtain loans have led to more students who receive loans. As a result of this, students at all income levels are borrowing more. From 1994–95 to 1999–2000, the amount students borrowed to attend a postsecondary institution increased from \$24 billion to \$33.7 billion. Most of the growth in loan aid has been through the Stafford Unsubsidized Loan program. From 1992–93 to

2002–2003, the amount of loans rose dramatically from \$1.019 billion to \$16.5 billion. During the same time, the amount of Stafford Subsidized loans grew from \$12.5 billion to \$17.8 billion (U.S. Department of Education, 2003). This is in large part due to the increase in tuition coupled with the decrease in Pell subsidies, which has resulted in an over-reliance on loan aid (Redd, 2001).

Students from all income levels are borrowing more than ever before. McPherson and Shapiro (1999) note that even though the majority of loans have probably gone to middle- and upper-income students, there is little evidence that this form of aid is essential to enabling them to attend college. Yet, there is considerable evidence that federal dollars targeted to low-income students do influence college enrollment decisions. Low-income students are more likely to enroll in higher education with grant aid than with loan aid (Paulsen, 1998). And, borrowing is a much greater burden for low-income students than their wealthy counterparts.

Loan debt of low-income students raises two issues. First, low-income students are more likely to be inhibited from enrolling for fear of debt. Families cannot help to repay loan debt and there is a higher likelihood of dropout by low-income students. Thus, the lack of a bachelor's degree and the good paying job that goes with it means that there is an even greater struggle for paying off the debt. Additionally, many low-income students help to support the family unit while attending college. Second, the financial consequences of post graduation debt impacts students' lives long after graduation. It impacts their ability to purchase a home, start a family, or save for retirement. In addition, low-income students may be making choices driven by economic factors such as what career path they will follow. Efforts to attract quality graduates into important, but low-paying jobs, such as teaching, may well be undermined by substantial debt burdens. This not only is harmful to the individual, but to society as well (National Center for Public Policy and Higher Education, 2002).

#### THE FINANCIAL NEXUS

In a series of articles, Edward St. John and Michael Paulson develop an integrative model that explains the complex interactions between finance and academic preparation in influencing college choice. In doing so, they examine how financial concerns present barriers at every stage of the college selection process. In this view, finances can be seen to

have both direct and indirect influence on enrollment behavior. Some potential students simply cannot afford the high cost of college. But finances also shape the expectations and condition the choices of students and families well before they are thinking about college. In particular, St. John shows how students respond differently to changes in subsidies (grants, loans, and work) than to changes in price (tuition, fees and living expenses). The effects of changes in prices and subsidies on student persistence are different than their effect on students' first enrollment. Moreover, students' responses change over time as a result of changes in government financing strategies and the labor market.

The financial nexus model is the intersection of aspirations, student choice, and persistence (St. John, Paulsen, and Starkey, 1996). In their 1996 study, St. John, Paulsen, and Starkey found that students made mental calculations about the costs and benefits of their college experiences. Financial and academic factors influenced the enrollment and persistence decisions of students. Similarly, when students made decisions about re-enrollment they also made mental calculations about whether or not the quality of their education was worth the cost. In a follow up study, Paulsen and St. John (1997) looked at the difference between public and private institutions. An interesting finding was that financial aid in private colleges was sufficient, while financial aid in public colleges was insufficient. This is likely due to investments that private colleges make to help offset the loss of student financial aid. However, the nexus analysis did find a negative correlation between choosing a private college because of financial aid and persistence. Thus, finances appear to be more important to those students who enrolled in public institutions. This is likely due to the fact that those attending private colleges are from higher socioeconomic backgrounds. Here the authors note that in the early prematriculation stages, financial aid administrators must supply students and parents with accurate information about the actual costs of college and financial aid options (Paulsen and St. John, 1997).

Further studies by Paulsen and St. John (2002) and St. John (2003) refined the financial nexus model to examine persistence by undergraduates in four distinct income groups. The analyses looked at the differences among social class and income group in regard to perceptions and expectations of costs and the effect of cost on choice and persistence decisions. Their findings confirmed earlier studies. Not only do low-income student perceptions about the cost of college influence the decisions they make, but so too does the actual cost. Among poor and working-class students, tuition had an alarmingly high negative influence

on persistence. Each \$1000 of tuition differential decreased the probability that the otherwise-average student would persist by about 16 and 19 percentage points, respectively (p. 223). This study also found that financial aid was not adequate enough for many low-income students to persist in college. Both grants and loans had a direct negative effect on persistence decisions made by low-income students.

St. John (2003) sums up the role of finances on low-income decisions.

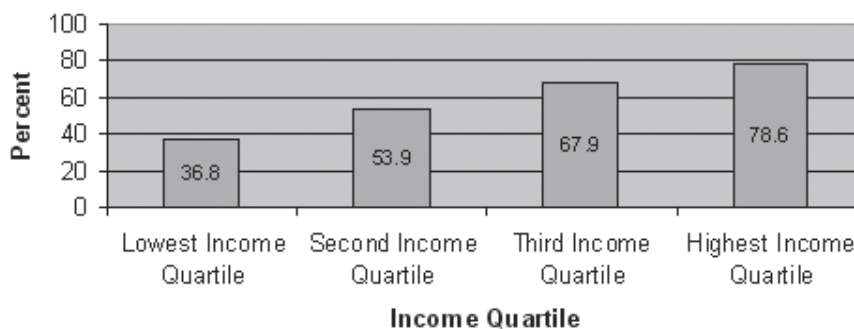
Finances have both direct and indirect influences on enrollment behavior. The most substantial effects of finances are indirect. Low-income families — parents and children — are concerned about college costs. In eighth grade, many of these students expect that they will not be able to afford college, yet they take the steps to prepare. In twelfth grade, 20 percent do not expect to go to college. Those students who do go to college face costs that are in excess of 20 percent of their families' total income (p. 170).

## THE CUMULATIVE CONSEQUENCES FOR LOW-INCOME STUDENTS

While increasing tuition impacts all economic sectors, there are especially troubling trends for low-income students. They are college participation rates, economic segregation and type, and degree attainment.

### COLLEGE PARTICIPATION RATES

College participation rate is defined as the percentage of those students who graduate from high school and continue on to college. In other words, they are the proportion of dependent, 18- to 24-year olds who reach college by overcoming admissions and price barriers. For low-income students, who face a myriad of obstacles to obtaining admission to higher education, college participation is often an unrealized dream. In fact, in 2001, college participation for dependent, 18- to 24-year olds in each of the family income quartiles were 36.8 percent for the bottom quartile; 53.9 percent for the second quartile; 67.9 percent for the third quartile; and 78.6 percent for the top quartile (see Figure 6.6). Thus, students in the top income quartile were more than twice as likely to attend college as their counterparts in the bottom income quartile. And, this has been consistent since the 1980s (Mortenson, 2003c).

**Figure 6.6:** College Participation Rates by Income Quartile for Dependent 18 to 24 Year Olds

When examined through a racial lens, participation among minorities is not much better. According to St. John (2003), in 1975, participation rates among Whites and Blacks were nearly equal, 32.3 percent and 31.5 percent, respectively. Hispanics had a slightly higher participation rate of 35.5 percent. But by 1999, a large disparity had arisen with Whites accounting for 45.3 percent, Blacks accounting for 39.2 percent, and Hispanics accounting for 31.6 percent of college participants. Blacks and Hispanics did increase their participation rates during this time, but not at the level in which their White counterparts did. White participation had increased 12 percent. Yet Blacks and Hispanics lost ground with their participation rates being 6.1 percent and 13.7 percent lower, respectively.

#### ECONOMIC SEGREGATION BY INSTITUTIONAL TYPE

Beginning in the 1980s, segregation of American higher education has accelerated at an alarming rate. Low-income students, as measured by Pell grant eligibility are increasingly pushed toward two-year public colleges. Of those low-income students who opt for a four-year public college, they are usually segregated into open-door, four-year institutions. The reverse is true for upper-income and wealthy students, who disproportionately attend the most selective four-year institutions in the U.S. In fact, in 1980, 60 percent of Pell grant recipients attended a public, four-year institution, while 40 percent attended a two-year institution. In 2002, however, only 44.7 percent of Pell grant recipients attended a public, four-year institution, while 55.3 percent attended a two-year institution (Mortenson, 2003b). This growing economic segregation of American higher education has been the direct result of federal, state,



and institutional policies. The cumulative effect of these policies has resulted in the sorting and redistribution of higher education according to economic class (Mortenson, 2003b).

At the federal level, policies have been such that financial aid based on need has been greatly restricted, while aid based on merit has been greatly expanded. At the state level, as states have reduced their support of higher education, they have forced institutions to increase tuition and fees charged to students. Finally, four-year institutions have become increasing selective in their admissions policies and process. They recruit more affluent students and package financial aid in such a manner as to attract students from wealthier backgrounds. This in turn, again, disadvantages low-income students, who are often entering higher education less academically prepared and thus, less likely to be awarded these financial aid packages.

#### DEGREE ATTAINMENT

Over a 20-year period, degree attainment rates have varied considerably among low-income and high-income students. In 2001, the estimated bachelor's degree completion rate by 24-year olds by each of the family income quartiles were 12.2 percent for the bottom quartile; 22.9 percent for the second quartile; 36.2 percent for the third quartile; and 65.5 percent for the top quartile. Here, the problems faced by low-income students are even more pronounced as those in the top income quartile are more than *five times as likely* to complete a bachelor's degree by the age of 24 as their bottom income quartile counterparts. This has been the trend since the early 1980s where college completion rates for low-income students has declined by 13.6 percent from 1983 to 2001. Despite any successes low-income students may have garnered on the road to enrollment, government and institutional policies have been such that a hostile environment now appears to exist for low-income higher education access and success (Mortenson, 2003c).

For Blacks and Hispanics, the problems are even more pronounced. The overall population of dependent, black 18- to 24-year olds was 16.1 percent in 2001. Yet, they represented 27.9 percent of the bottom family income quartile, 15.5 percent of the second, 9.2 percent of the third, and only 6.2 percent of the top quartile. Hispanics have not fared much better, representing 17.7 percent of the dependent 18 to 24 year olds in 2001. Hispanic income distribution was 28.9 percent of the bottom quartile, 19.7 percent of the second, 11.0 percent of the third and 6.9

percent of the top income quartile (Mortenson, 2003c). Given the larger percentage of low-income minorities — Blacks and Hispanics, specifically — at the bottom income quartile, clearly degree attainment is especially elusive for these populations.

### THE IMPACT OF REVENUE SHORTAGES ON PUBLIC COLLEGE QUALITY

Low-income students are not the only ones who are harmed by the spiral of public college tuition inflation. Public colleges are also harmed in important ways. The most obvious is the increasing economic segregation among institutions that has resulted from the price increases. As tuition rises much faster than income and grant resources, some students who might have preferred a four-year institution now choose a two-year institution instead. Students who might have attended full time, may now only attend part time. And others who might have attended a low price institution may now choose not to attend at all.

In a study focusing on the period 1980 to 1994, Michael McPherson and Morton Owen Shapiro (1999) found that lower-income students were enrolling in community colleges in much higher proportions and upper income students in much lower proportions. Similarly, a study by the Institute for Higher Education Policy (2000) found that between 1990 and 2000, the proportion of low-income freshman decreased at most types of four-year colleges, but increased at two-year colleges. The proportion of higher income students decreased at less selective four-year institutions and increased at more selective four-year institutions. Jacqueline King (2003) found that only 29 percent of low-income students attended four-year institutions as compared to more than 50 percent of middle and upper-income students. She also found that low-income students were less likely to attend full time than middle and upper-income students and thus were less likely to complete their degree.

The result of these trends has been to reinforce the economic segregation among public institutions. As college choice becomes more closely linked to family income, institutions find themselves facing more homogeneous enrollments. The resulting loss of diversity in the student population hinders everyone's learning and diminishes the richness of student interactions. As a consequence, public higher education may be providing an increasing number of students with the same kind of uni-ethnic, uni-cultural, uni-income environment that has now become the norm in many American secondary schools.

There is a second problem that faces institutions as prices rise. Even at their current levels of tuition inflation, these institutions have not been able to generate revenue at a rate sufficient to compensate for the loss of state funds. This has created revenue crunches on many public campuses that hold down spending per student and risk harming the quality of the educational experience they offer. Kane and Orszag (2003) describe it this way:

Fearful of the political consequences, state governors and legislators have been reluctant to allow the higher tuition increases that would be necessary to fully offset the state cuts to higher education and to allow public institutions to keep pace with private ones. As result, educational spending per full-time equivalent student has declined at public institutions relative to private institutions: the ratio fell from 70 percent in 1977 to about 58 percent in 1996. These differential spending trends have begun to manifest themselves in indirect measures of quality in public higher education (p. 4).

This concern is most clearly seen in the declining salaries of faculty members at public institutions relative to their private counterparts. As discussed earlier, faculty salaries and compensation have increased steadily at public colleges. During that same period, however, faculty salaries at private institutions increased even more rapidly. In 1980, average faculty salaries at public institutions were higher than they were at private institutions. By 1990, faculty salaries at private institutions had surpassed their public counterparts. During the 1990s, faculty salaries at public institutions, as measured in constant 2000 dollars, increased by only three percent. Faculty salaries at private colleges have increased by 8 percent. Moreover, the trends driving these differentials seem to be accelerating.

Several observers have speculated that these salary trends are making it difficult for public colleges to recruit and retain the best faculty. There is no national data series on turnover rates among faculty members. However in 1990, one study used AAUP data to estimate the turnover rates of faculty at different types of institutions. Reflecting on their findings more recently, the author of the study anticipated the impact on public institutions if the trends in turnover continued.

We found that other factors held constant, institutions with higher average salaries tended to have higher continuation rates (that is lower voluntary turnover rates) than their competitors. Moreover, the magnitude of the relationship was largest at doctoral universities. Given the pattern of public-private salary differentials in recent years,

one would expect that private institutions of higher education would have higher average continuation rates among associate professors than their public sector counterparts (American Association of University Professors, 2003, <http://www.aaup.org/surveys/zrep.htm>).

While the impact that rising public college prices have on students is clear, its impact on the institutions themselves is no less a concern. The segregation of the student body as a result of rising prices has forced public colleges to engage in new spending initiatives. Targeted institutional scholarships, increased tuition discounting, and expanding recruitment staffs have all undertaken to compensate for the impact of rising prices. These initiatives all require additional spending that can further fuel tuition inflation. Additionally, pressure to hold down prices and maintain enrollments serves to limit the revenue available to campus leaders. They have responded by holding salary increases well below those paid by private institutions. This risks losing the best faculty to competitor institutions and diminishing the overall quality of the campus and its programs. Thus, as low-income students are losing access to more expensive institutions, revenue pressures are reducing the quality of those lower priced institutions that are still within their reach.

## CONCLUSION

Since 1980, the real price of attending a public two-year or four-year college has increased 168 and 126 percent, respectively. While the rate of increase has not been consistent over time, or from state to state, there is an unmistakable upward trend everywhere. There are multiple reasons for these price increases and substantial disagreement over which were the most important. The on-going budget troubles of the states certainly played a part. As states faced severe revenue shortfalls resulting from economic downturns, and were forced to spend each year more on Medicaid, they reduced support for higher education as a portion of their total expenditures. Public colleges responded to these cuts by substituting tuition and fee revenue for the lost state dollars. Public colleges have also increased their spending per student and are increasing their spending on research, salaries, benefits, technology, and facilities. These increases have also been financed by the revenue generated by tuition increases.

These tuition increases have had important consequences for students, and to a lesser extent, the institutions themselves. Tuition inflation, coupled with important changes in federal and state student aid, have

threatened to move public higher education out of the reach of many lower income students. The impact of price increases can be seen in several ways. Low-income students are less likely to aspire to college, more likely to choose a two-year institution, and less likely to graduate. These factors have led to a widening gap between the college participation rates of low-income students and their higher-income counterparts. It has also left a growing number of college-prepared, low-income students from entering college at all.

Public colleges have also experienced problems resulting from tuition inflation. As prices rise, many campuses are becoming less economically and racially diverse. This is most evident at four-year institutions and at those campuses that have selective admissions requirements. Some institutions have attempted to address this problem by developing institutional scholarship programs to encourage or maintain diversity. But these are expensive and risk further driving up the price for everyone else. Finally, there is some preliminary evidence that public colleges may be experiencing revenue shortages that are having a negative impact on program quality. If public colleges are unable to pay faculty salaries equal to their private competitors, they run the risk of losing their best faculty. Over time, this will diminish the ability of these institutions to offer programs of comparable quality to their private competitors.

Students, their families, the general public, and state and federal policymakers all view public college tuition inflation as a cause for great concern. This analysis concludes that these concerns are justified. Rising prices do matter. But it also shows that holding down tuition is no easy matter. The causes of tuition inflation are complex and disputed. Congressional efforts to sort out their fundamental causes have proven unsuccessful. The approach most likely to succeed is to significantly increase state support to public higher education. But this is beyond the financial reach of most states. Moreover, increases in the number of students seeking to enter higher education in the next decade will force states to increase their level of support simply to maintain current levels of service. Policymakers are, thus, left with a difficult choice. If they take no action, the result will almost surely be higher prices, reduced access for low-income students, and less diverse and lower quality public campuses. Improving access, however, will require state and federal policymakers to spend more on higher education. These additional expenditures will strain state budgets even further and require either higher taxes or the redistribution of funds from other state programs.

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## 7. PERCEIVED (ACADEMIC) CONTROL AND SCHOLASTIC ATTAINMENT IN HIGHER EDUCATION\*

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The geopolitical climate of late 18th century France described by Charles Dickens as “the best of times, the worst of times” is no less true today of postsecondary institutions in North America. “The best of times” are seen in the dramatic expansion of the postsecondary education system in the last 50 years — more openings are available and a greater diversity of groups have access to those openings. In Canada, for example, the number of undergraduate students increased from approximately 115,000 in 1960 to almost 850,000 in 2000, while Canada’s population grew by less than 2-fold (Canadian Association of University Teachers, 2003; Clifton, 2000; Sokoloff, 2004). During this same period, female undergraduate participation rates have risen from less than 25% in 1960, to 50% in 1980, and over 57% in 2000 (Clifton, 2000; Sokoloff, 2004). Compared to the 4-fold increase for male undergraduates, the number of female undergraduates increased by more than 14 times. Participation

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rates in the U.S. postsecondary education system are comparable (National Center for Educational Statistics, 2004).

With an expanding postsecondary system comes substantial economic benefits for students as well as for the broader society. According to Paulsen (1998), earnings for male college students were superior to high-school-educated males, when all fields and levels of experience are combined, by 40% in 1963, 48% in 1971, and 58% in 1989 (Murphy and Welch, 1992). Studies of identical twins indicate that earnings increase roughly 12% to 16% with each additional year of college education (Ashenfelter and Krueger, 1994; Miller, Mulvey, and Martin, 1995). Moreover, the type of college plays an instrumental role in the occupational status attained by students in professional and nonprofessional jobs (Smart, 1986) and in their eventual income levels (Smart, 1988). Within the broader societal context, Leslie and Slaughter (1992) showed that each \$1 million invested by a four-year college in its budget results in \$1.8 million in additional business spending and 53 new jobs, with similar figures reported by Creech, Carpenter, and Davis (1994).

Meanwhile, “the worst of times” are reflected in the accelerating failure rates and the decreasing quality of graduates. An unacceptable number of undergraduates leave college prematurely and many new graduates are deficient in basic numeracy and literacy skills that were commonplace decades ago. Surveys of participation rates in U.S. postsecondary institutions show that approximately 50% of graduating high school students enroll in college, but of these, 27% leave at the end of their first year, and fewer than 55% of those remaining graduate after five years (Desruisseaux, 1998; Geraghty, 1996). Of every 100 high school students in Grade 11, no more than 14 will graduate from college after five years. Figures for Canadian postsecondary institutions are equally disconcerting, as for example, at our own university, only 55% of first-year students will graduate within six years after entering their respective undergraduate programs.

More opportunity to pursue postsecondary studies, it would seem, is inextricably linked to a higher incidence of failure — an unanticipated nexus of access and failure that embraces both optimistic and pessimistic perspectives. Greater institutional choice also means that college students have more responsibility for their academic development. Never before have personal autonomy, independence, and self-reliance played such a large role in college students’ educational experiences. In this context, we view quality of educational experience broadly in terms of teaching and learning processes that promote academic motivation and

achievement-striving, as expressed in cognitive, affective, and performance outcomes in students.

The present chapter examines student differences in perceived control within higher education settings and how these differences impact students' achievement, persistence, and overall scholastic development. As part of this analysis, we consider other academic differences among college students, such as course-related emotions and perceptions of success, that interact with perceived control to enhance or impede academic motivation and achievement striving. Finally, the chapter explores the interaction between academic control in students and classroom instructional practices as a form of aptitude-treatment interaction described by Cronbach and Snow (1977). In this context, we introduce an instructional practice that is an educational treatment intervention expressly designed to assist failure-prone college students by enhancing their academic control, referred to as Attributional Retraining.

#### PERCEIVED ACADEMIC CONTROL: A RESEARCH PERSPECTIVE

Our main thesis in this chapter is that students who describe themselves as psychologically "in control" work harder, feel better about their studies, obtain better grades, and have more productive academic careers than their "out of control" counterparts. Simply put, two students who are equally capable intellectually may perform very differently in their courses, because of the level of control they believe they have over their academic performance. For our purposes, *perceived academic control* refers to students' beliefs about whether they possess certain attributes, such as intellectual ability, physical stamina, effort expenditure, task strategies, social skills, and educational experience, and whether such attributes make a difference to their scholastic performance (cause-effect contingencies). In this context, student differences in perceived academic control can be viewed as a continuum anchored by two distinct student groupings: *low-control students* who are failure-prone and helplessness-oriented, and *high-control students* who are academically successful and mastery-oriented. Within this framework, low-control students are expected to have very different academic trajectories than their high-control counterparts in terms of cognitive, affective, motivational, and achievement outcomes. Both types of students are assumed to be represented in a typical college classroom, along with other students (moderate-control) who occupy the middle of the control continuum.

Two fundamental questions must be addressed when considering

the role of perceived academic control in the scholastic development of college students. First, what is the effect of academic control on achievement motivation and scholastic performance when students enter college initially, and relatedly, throughout their undergraduate training? Embedded within this first research question are two related issues concerning the relative effects of perceived control compared to traditional predictors such as intelligence, prior knowledge, and socioeconomic status, and the sustainability of perceived control effects on academic development over time. These two issues are of interest not just to students, but to instructors and postsecondary institutions as well. Instructors want to know, for example, whether differences between college students in academic control influence scholastic performance separately from aptitude and other student differences pertinent to learning and performance; and if so, by how much and for how long.

The second question concerns whether classroom instructional methods can offset the deleterious consequences uniquely associated with low academic control. Low control in college students is particularly worrisome when normally effective teaching methods are ineffective with low-control students. If differences in academic control are critical, then instructors may want to tailor their teaching methods to students differing in control. The discussion method of instruction, for example, may be suitable for high-control students because of its open-ended structure, but not so for low-control students for the same reason; or, the lecture method may appeal to low-control students because of its highly structured and predictable nature, but not to high-control students because of the lack of autonomy. Control-enhancing educational interventions would have special appeal to classroom instructors if they can be readily incorporated into their teaching methods to assist low-control students in getting better grades and staying in college. In the context of this second question, we introduce *Attributional Retraining (AR)* as a control-enhancing treatment designed to assist failure-prone, low-control students which can be readily incorporated into instructors' classroom teaching methods (see Attributional Retraining: A Control-Enhancing Instructional Treatment section below).

Over the past two decades, we conducted a number of experimental studies to explore these two basic research questions in both laboratory and field settings (Perry, 1991, 2003). A common core  $2 \times 2$  factorial design was used to test the effects of academic control (low, high) and instructional treatments (control-enhancing treatment, no treatment) on performance and achievement-related measures involving cognition,

emotion, and motivation. The first question concerning individual differences in academic control is a main effect question which statistically addresses whether high-control students perform better than low-control students in their first year of college and throughout their undergraduate studies. The second instructional treatment question is examined in two ways: first, with a control-enhancing treatment main effect which examines whether both low- and high-control students perform better after receiving the treatment, compared to those not receiving the treatment; and second, with an academic control  $\times$  treatment interaction which is a type of aptitude-treatment interaction (Cronbach and Snow, 1977). This interaction question considers whether the AR educational treatment intervention (treatment vs. no treatment) improved the performance of some students (low control), but not others. The bulk of the chapter is devoted to a detailed exploration of these research questions.

#### PERCEIVED CONTROL AND ACADEMIC ACHIEVEMENT SETTINGS

Although college students are selected for their intellectual and academic capabilities, surprising numbers fail, even as the criteria for admission to postsecondary institutions become increasingly stringent. As shown by Anastasi (1988) and Britton and Tesser (1991), pre-college aptitude determines only 16% to 20% of variance in college grades, a finding replicated with increasing frequency. Presumably, admissions criteria should increase students' success rates, yet college students are taking longer to graduate or are simply withdrawing from postsecondary education entirely. Perry, Hladkyj, Pekrun, and Pelletier (2001) describe this deficiency in traditional selection criteria as a *paradox of failure* to describe outwardly bright, motivated college students who subsequently fail despite having met stipulated admissions criteria. They argue that an accurate account of this paradox must include psychosocial variables, notably perceived control, in addition to typical academic and demographic selection criteria involving intellectual aptitude, disciplinary knowledge, academic skills, socioeconomic status, gender, and English-language fluency. Considerable latitude exists in the research literature in the specification of psychosocial variables, however, they are generally considered to include a host of noncognitive variables related to personality, attitudes, creativity, curiosity, motivation, emotion, and so on, but exclude sociodemographic and cognitive variables.

A wealth of empirical evidence supports the importance of psychosocial variables for scholastic attainment in college in addition to

more traditional, aptitude and cognitively-based criteria such as SATs and GREs (cf., Pascarella and Terenzini, 1991). For example, in a two-semester longitudinal study, Perry *et al.* (2001) assessed first-year college students' beliefs about their control over academic outcomes and about their preoccupation with success and failure, using covariate analysis to adjust for intellectual aptitude. Students who believed they had control over academic outcomes and who were preoccupied with failure had better grades than all other students at the end of the course, and had better GPAs in all courses taken over a three-year period (Perry, Hladkyj, Pekrun, Clifton, and Chipperfield, in press). Harackiewicz, Barron, Tauer, and Elliott's (2002) seven-year longitudinal follow-up study demonstrated the importance of achievement goals for academic success in college. As expected, ability and high school performance predicted academic success on entry to college and thereafter, but in addition, achievement goals also played a major role in students' scholastic development. Studies by Eaton and Bean (1995) and House (1995) also underscore the importance of psychosocial variables in the academic development of college students. In Robbins *et al.*'s (2004) meta-analytic review of the role of psychosocial factors in college success, perceived control (self-efficacy) and achievement motivation were the strongest predictors of college GPA and persistence (retention) of all psychosocial factors considered, and were superior to socioeconomic status, standardized achievement, and high school GPA.

#### *Perceived (Academic) Control*

What is variously labeled autonomy, independence, or self-reliance in common parlance, is viewed here as perceived control, a psychological construct that has received widespread interest in the social sciences over the last five decades. As a construct, it has evolved from Rotter's (1966) conception of it as an individual difference variable (locus of control) and Glass and Singer's (1971) depiction of it as an environmental (contextual) stressor, to a critical component in many present day social cognition theories, including competence motivation (White, 1959), personal causation (DeCharms, 1968), learned helplessness (Seligman, 1975), mastery (Dweck, 1975), reactance (Wortman and Brehm, 1975), self-efficacy (Bandura, 1977), self-determination theory (Deci and Ryan, 1985), primary/secondary control (Rothbaum, Weisz, and Snyder, 1982), action control (Kuhl, 1985), causal attributions (Weiner, 1985), and mindfulness (Langer, 1989). It is also featured prominently in research



on academic achievement (Dweck, 1975; Stipek and Weisz, 1981), health (Chipperfield and Greenslade, 1999; Thompson, Sobolew-Shubin, Galbraith, Schwankovsky, and Cruzen, 1993), stress (Folkman, 1984), depression (Garber and Seligman, 1980), aging (Rodin, 1986), and human mortality (Chipperfield, 1993).

Perceived control is a person's subjective estimate of his or her capacity to manipulate, influence, or predict some aspect of the environment. In the research literature, the prevailing view is that higher perceptions of control are more advantageous than lower perceptions of control. As Skinner's (1996) seminal review so aptly illustrates, the construct continues to evolve to an ever-expanding list of terminology and complexities. In general, perceived control refers to beliefs about the predictability of life's daily events and about the capacity to influence such events, with "perceived" reflecting subjective rather than objective capacity. This phenomenological distinction between "perceived" and "actual" capacity results in the correlation between subjective and objective control ranging from positive to negative (cf., Thompson *et al.*, 1993). Some people assume they have more or less capacity to influence and to predict events than they have in reality, whether as a stable and enduring part of their personality, or as a temporary and transient experience.

These stable and transient forms of perceived control can be thought of as being trait- and state-like manifestations of perceived control, somewhat comparable to trait/state distinctions in personality theory (cf., Eysenck, 1997; Wiggins, 1996). *Stable perceived control* is more enduring and is an integral part of an individual's personality makeup, the result of biology and past learning experiences. In contrast, *transient perceived control* is much less enduring and a product of temporary and ongoing intrusions of daily life. Within college classrooms, the learning contingencies can cause the level of transient control in students to fluctuate widely (see Academic Control and Low-Control Learning Environments section below). As such, an individual's level of stable perceived control can vary as a function of changing levels of transient perceived control created by situational factors. Research perspectives on perceived control typically differ with regard to trait generality, as for example, Bandura (1997) who considers self-efficacy to be a domain-specific entity, whereas Rotter (1975) considers locus of control to be a general attribute. These differences between individuals in perceived control, stable or transient, generate cognitive, emotional, and behavioral consequences, leading people with greater perceived control to think, feel, and respond differently than those with less perceived control.

In achievement settings, we view *perceived academic control* as a

relatively stable psychological disposition affecting students' motivation and achievement-striving as revealed in class tests, term assignments, course grades, GPA, etc. It is deemed to be "relatively" stable because assessments of trait perceived control may include the effects of transient elements as well, assuming that periodic environmental intrusions can affect a person's general sense of control to some degree (e.g., Rotter, 1975; Skinner, Connell, and Zimmer-Gembeck, 1998). Initially, we assessed academic control using a single-item, domain-specific measure (Perry and Dickens, 1984), but subsequently expanded this to a multi-item scale (Perry, Hladkyj, and Pekrun, 1998; Perry *et al.*, 2001) incorporating primary academic control, secondary academic control (Rothbaum *et al.*, 1982), and desire for control (Burger, 1989). This reconfiguration follows from the social cognition literature in which perceived control has been defined with a variety of single- and multiple-item measures (Skinner, 1996).

Within this framework, perceived academic control is deemed to be a personal attribute students bring to the classroom that interacts with various aspects of the classroom environment, the most salient being the teaching methods employed by instructors. In addition to academic control beliefs, other dispositional (stable) student characteristics that contribute to students' scholastic development would include constructs such as optimism, self-worth, perceptions of success, and so on. How these stable, personality-like variables relate to academic control goes beyond the scope of this chapter, however, in our own studies academic control has been found to relate positively to: optimism ( $r_s = .26-.34$ ), self-esteem ( $r_s = .40-.44$ ), cognitive elaboration ( $r_s = .22-.26$ ), desire for control ( $r_s = .34-.51$ ), procrastination (.18), and Big 5 Personality constructs involving Extraversion (.17), Agreeableness (.18), Openness to Experience (.23), and Conscientiousness (.16).

### *Desire for Control*

In considering pre-existing dispositional differences in control among students, it is important to recognize that students' "perceptions of control" differ from their "desire for control" (Burger, 1995; Schulz and Heckhausen, 1996). Despite individual differences in levels of perceived academic control, both low- and high-control students share a common *desire* to influence their scholastic endeavors, although the level of desire may vary across academic tasks. Some students may believe they can control certain academic outcomes, yet view that control as

unimportant (i.e., high control/low desire), as in the case of students taking a “practice test,” completing an assignment not worth any formal marks, or taking an elective course. These students believe they will perform well on the practice test, but this control is of little value (low desire) to them because the outcome (test score) is unimportant. Similarly, students taking piano lessons or engaged in an athletic sport, but who have little interest in the activity, may perform poorly, even though they have ample talent to excel in the task. In such cases, students having little interest in or desire for their academic endeavors (low desire) does not necessarily imply a lack of control in those circumstances.

The reverse is also the case, however, where students want to influence academic outcomes (high desire), but perceive themselves as having little control over those outcomes, no matter how badly they may want more control (i.e., low control/high desire). Many students, for example, want to perform well in their courses, but are nevertheless uncertain about how to achieve optimal outcomes. Moreover, because academic performance is such an important aspect of their lives, students are likely to desire a considerable amount of control over their achievement outcomes. This desire for control fuels the development of perceptions of control by regulating the type of goals and situations that individuals pursue and their capacity to deal with those situations (Burger, 1995; Burger and Cooper, 1979).

Covington (1992) has argued persuasively that students’ self-worth is intricately interwoven with their desire to do well in academic settings. He points out that students tend to equate their own sense of worth with their competitively determined academic accomplishments (e.g., grades assigned by their instructors). As such, the top priority among these students is to strive for academic success and avoid failure, the latter viewed as a sign of incompetence. Thus, a key assumption in academic control research is that students generally want to control their educational experiences. Instances in which this is not the case are of special interest.

### *Academic Failure*

Academic failure, its consequences, and its remediation are critical not just to perceived control researchers, but also to the students themselves, their instructors, and the institutions they attend. For college students, the psychological consequences of failure can threaten their

self-worth, erode their perseverance, and undermine their career goals. Moreover, the financial burden of failing a course or changing programs can lengthen graduation completion time substantially, adding thousands of dollars in direct educational costs, as well as indirect costs in lost wages. In contrast, highly motivated students with good academic skills and who receive effective instruction complete their education in much less time, incur far fewer personal and institutional expenses, and have better career options available to them when they graduate. For postsecondary institutions, student failure can amount to tens of thousands of dollars per year in administrative costs for course and program changes, for counseling services, for remedial skills courses, and so on. When academic failure leads to withdrawal from the university, lost tuition revenues for as few as 100 students can add up to \$500,000 a year, based on a conservative estimate of tuition costs of \$5,000 per year.

Weiner's theory of achievement motivation and emotions (1985, 1995; see below) provides insight into academic failure in college classrooms. Academic failure initiates a causal search in students to identify the reasons (i.e., causes, explanations) for poor performance. The resulting causal attributions can have significant consequences for students' more immediate scholastic performance and for their overall academic career development. A student who attributes a series of failures on course tests to a lack of effort has a better prognosis academically than a student who attributes such failures to a lack of ability. The "low ability" student will experience a loss of perceived control, negative emotions, lack of motivation, and an increased probability of failing subsequent tests and withdrawing from college. Unfortunately, failure is all too common in college, particularly in the first year when students are making the transition from the comfortable realities of high school to the unknown realities of college. How students' perceptions of academic control are affected by both success and failure experiences is discussed in greater detail below in the context of Weiner's theory of achievement motivation (see *An Attributional Framework for Perceived Control in College Classrooms*).

The remediation of failure is pertinent to all students who struggle at some point in their academic careers, but more so for those who fail repeatedly. Furthermore, postsecondary institutions are also becoming more concerned about failure remediation because of its relevance to student access and attrition. Many colleges and universities have implemented remedial programs to assist failure-prone students and access programs designed for students whose qualifications and experiences may impede entry into higher education. Obviously then, policies and

procedures intended to reduce student failure are of significant financial value to and practical importance for postsecondary institutions. In a later section, we examine in detail how Attributional Retraining can offer a viable failure-remediation solution for college students and postsecondary institutions alike.

#### *Academic Control and Low-control Learning Environments*

For over three decades, perceived control researchers have demonstrated how unpredictable or noncontingent events can produce loss of perceived control and helplessness in animals and humans (see Skinner, 1996 for a review). When outcomes and events in the environment are unpredictable and/or cannot be influenced by a person, perceived control is reduced, giving rise to helplessness and hopelessness (Garber and Seligman, 1980; Glass and Singer, 1971; Weiner, 1980). The emphasis on “perceived” in perceived control means that the objective realities of predictability and contingency are inferred by the person in a given situation. Thus, a situation that is objectively predictable or controllable may be perceived as a low-control situation by one person and as high-control by another. Or, a situation that is objectively unpredictable and/or uncontrollable may nevertheless be perceived as a high-control situation. In most instances, the correspondence between the objective and subjective reality of a given situation is reasonably isomorphic, although perceived differences between objective and subjective reality can exist for a given individual or between individuals in the same situation. Situations which limit perceived predictability and/or the perceived capacity to influence events create optimal conditions for observing the impact of academic control on scholastic attainment.

Though academic experiences in college may be “objectively” controllable, students’ subjective (phenomenological) or perceived controllability is the operative reality here (Weiner, 1985, 1995), sometimes causing objectively controllable learning experiences to be perceived as uncontrollable, or objectively uncontrollable learning situations as controllable. For some students, any number of academic demands and tasks can be sufficiently novel and unfamiliar as to create unpredictable and noncontingent conditions, that in combination, generate a highly aversive, control-threatening classroom learning environment. But for other students, these same classroom conditions are commonplace, having been part of previous academic experiences, and are seen as reasonably predictable and contingent. Each occurrence can represent

some combination of unfamiliarity, challenge, unpredictability, or failure, any one of which portending a loss of perceived control (Skinner, 1996; Weary, Gleicher, and Marsh, 1993).

Thompson *et al.* (1993) describe life situations which inundate individuals with objectively unpredictable events and outcomes as *low-control environments* because they create a psychological state of being “out of control.” Perry (1991, 2003) argues that such low-control environments can develop at different levels of the educational system when a disproportionate number of unpredictable and/or uncontrollable achievement events occur in classrooms and other academic contexts. The first year of college can be a prototypic control-threatening learning environment to the extent that students’ academic and social experiences undermine their perceived control as a result of heightened academic competition, increased pressure to excel coupled with more frequent failure, unfamiliar academic tasks, critical career choices, new social networks, etc. To the extent that these experiences occur within classrooms, they can be described as low-control learning environments. Because of this, in college classrooms, in contrast to high school classrooms, failure experiences can be more common. At the same time, however, the potential for control, and related successes, is also greater, which in itself may pose a threat to control for some students.

These experiences are assumed to occur with greater regularity during transition periods throughout students’ educational development, such as the first year of college, and create more low-control perceptions relative to other years in college (Perry, 2003). Within the K-16 education system, such classroom conditions are more likely during transition years, as might occur in kindergarten, grade 1, grade 7, grade 10, or first-year university. These low-control transition periods, in turn, can have a direct, though temporary, influence on students’ perceived academic control. For students continuing their education beyond K-16, additional low-control transition periods would include the first year of graduate or professional school and beginning a new job or career (cf., Bess, 1973; Menges *et al.*, 1999; Perry *et al.*, 1997, 2000; Smart, 1990).

In contrast to these episodic, educationally-contextualized experiences, perceived control has stable and enduring qualities that the student brings to an achievement setting, low-control or otherwise. In transition periods characterized by a high frequency of unpredictable achievement episodes, stable differences between students in personal control and transient control will jointly determine achievement motivation and performance, with students high in academic control outperforming

their low-control counterparts. How state- and trait-like factors contribute to overall perceived control is not precisely clear in the literature (cf., Skinner, 1996), however, both are obviously important. Aside from affecting students' transient academic control, repeated experiences with low-control classroom settings likely are incorporated into their more enduring sense of control. In our research discussed below, we focused on the first year of college as a "low-perceived-control" experience in which student differences in perceived academic control are expected to be more pronounced.

#### AN ATTRIBUTIONAL FRAMEWORK FOR PERCEIVED CONTROL IN COLLEGE CLASSROOMS

Our perspective on perceived academic control in college students begins with the conventional position that perceived control is determined by two broad categories of variables, namely the characteristics of the individual and the properties of the environment. In achievement settings, perceived control is deemed to be a personal quality that students bring to the classroom, like intellectual aptitude, gender, socioeconomic status, discipline knowledge, intrinsic motivation, etc., which is influenced by, yet separate from, the properties of the classroom itself (Glass and Singer, 1971; Perry, 1991, 2003). Perceived academic control is considered to be one such characteristic that students bring to the classroom and a major individual difference directly affecting motivation and performance. Classroom properties also can contribute to a student's sense of academic control and would include not just the physical aspects of the setting, but also such factors as instructional quality, instructor's grading standards, classroom discipline, course level, curriculum structure, class composition and size, and so on.

Within this dichotomy of student characteristics and classroom properties, we adopt an attributional perspective on perceived academic control which focuses on the causal attributions students use to explain their academic successes and failures (cf., Weiner, 1985, 1995). Assuming that college students are actively engaged in trying to make sense of their classroom experiences in order to succeed, they will search for explanations (causal attributions) of their successes and failures within themselves and within the educational context. The personal characteristics of students offer a rich source of possible causes for their successes and failures, the most salient being intelligence, prior knowledge, motivation, and personal goals (Van Overwalle, 1989, 1997). For college students, their quest for causal explanations is manifest in a preoccupation

with their personal attributes, reflected in such questions as, “Am I smart enough?” “Can I hang in there long enough?” and so on. Such questions highlight students’ concerns about how their attributes affect their performance in comparison to other students, or to some absolute standard. The classroom properties category also presents numerous possibilities for explaining academic success and failure, the most prominent being instructional quality, content difficulty, and grading criteria, but also class size, temperature, lighting, etc. (Van Overwalle, 1989).

According to control theory, perceptions of control depend on perceived contingency between action and outcome (Rothbaum *et al.*, 1982; Rotter, 1966). Thus, within an academic context, perceived control refers to students’ perceived influence over and responsibility for their academic performance (Perry, 1991) which involves a perceived contingency between the student’s actions (e.g., studying) and subsequent academic outcomes (i.e., success or failure). Perceived contingency between actions and outcomes is inferred by students from their attributions for those outcomes. Consequently, to influence an outcome students must perceive the outcome as being dependent on their own actions or personal qualities. In this sense, perceived control is a product of a student’s belief in the contingency between his or her actions and an outcome, with the contingency relation being determined by the causal attributions selected. The stronger the perceived contingency, the greater the sense of control. If success on a class test is attributed to internal, controllable causes (e.g., one’s own effort), for example, a student is likely to view performance on a task as dependent on his actions, resulting in an increase in perceived control, motivation, and performance (Weiner, 1986). Thus, in terms of motivation, students’ subjective indicators of control are often more important than objective indicators of their actual control (Shapiro, Schwartz, and Astin, 1996).

The phenomenological basis of perceived academic control can be understood from the perspective of Weiner’s attribution theory of motivation and performance (1985, 1995) which has had a major impact on several areas of psychology, including clinical, educational, social, developmental, and learning (cf., Fiske and Taylor, 1991). Weiner argues that students’ explanations for their successes and failures are pivotal to achievement-striving and academic performance. Weiner proposes that people routinely seek to understand why they succeed and fail in life’s challenges. They are constantly trying to explain the world around them with such questions as: “Why did that happen?” “Why did she say that?” “Why didn’t he do that?” People’s answers to these “why” questions are the basis for their subsequent thoughts, feelings, and actions in future



situations. The process of identifying explanations or reasons for these “why” questions is referred to as *causal search*. Within this perspective, we would expect that students who explain their successes and failures using controllable causes should have more perceived control than those who attribute such outcomes to uncontrollable causes.

According to Weiner, all attributions resulting from causal search have three properties or dimensions: *locus of causality*, which refers to whether the causes of success or failure reside within (e.g., aptitude) or outside (e.g., chance) the individual; *stability*, which describes whether the causes are stable (e.g., industriousness) or transient (e.g., fatigue); and *controllability*, which indicates whether the causes can or cannot be influenced by the individual or someone else (e.g., laziness versus economic recession). In its simplest representation, the three dimensions of the taxonomy can be dichotomized and depicted as a locus (internal, external) by stability (unstable, stable) by controllability (uncontrollable, controllable)  $2 \times 2 \times 2$  factorial matrix, although in reality each dimension represents a continuum and not a dichotomy. Given that every causal attribution possesses these three properties, any attribution can be placed within one of the eight cells of this simple framework.

These dimensional properties of causal attributions determine subsequent cognitions, affect, and motivation, all of which, in turn, contribute to action. For instance, the stability dimension influences future expectations: a stable attribution (aptitude) about an outcome implies that it is more likely to reoccur than would an unstable attribution (chance). Each of the three dimensions also determines specific emotions which, in combination with expectations generated by the stability dimension, lead to motivated behavior. Feelings of guilt occur when a controllable attribution (low effort) is used to explain failure, or feelings of hopelessness can result if a stable attribution (low ability) is used to explain failure. Thus, the unique locus, stability, and controllability properties of an attribution can substantially alter a person’s motivation and behavior regarding future actions. A more complete account of this model is provided elsewhere (Weiner, 1985, 1986, 1995).

Consider Weiner’s theory applied to an achievement setting in which a student fails an important test and, in seeking an explanation, attributes the poor performance to lack of ability. Because ability is typically viewed as an internal, stable, and uncontrollable cause, the student would regard himself/herself as personally responsible for the negative outcome and would experience shame, sadness, lowered self-esteem, and in extreme cases, depression. These negative emotions would make the course much less attractive to the student and lead to avoidance. Coupled with high

expectations of continued failure, assuming lack of ability is perceived as stable, these negative emotions would undermine the student's motivation to succeed, thereby jeopardizing future performance and continuation in the course. In contrast, internal, unstable, and controllable attributions, such as effort, would have very different academic consequences. Similar to a lack of ability attribution, a lack of effort attribution for failure would generate negative affect (guilt vs. shame) because the student feels responsible for the poor performance, but it would be far less harmful. Shame is less likely to occur, self-esteem is less threatened, and other negative emotions are infrequent. More importantly, expectations about future success versus failure would be more positive because lack of effort is regarded as an unstable and controllable cause that can be modified. This suggests an optimistic scenario in which failure resulting from lack of effort can be changed to success by trying harder (more effort) next time. Thus, the student may not feel good about the course, but will strive to do better anyway.

This stability/controllability difference between ability and effort, and any other causal attributions, lies at the heart of achievement motivation and performance. Although both are internal attributions for failure, helplessness is more likely to result from a lack of ability attribution (stable/uncontrollable factor), whereas mastery is more probable from a lack of effort attribution (unstable/controllable factor). External attributions, such as fate or task difficulty, would create less negative affect, less harm to a student's self-esteem, and less helplessness. Simply put, the more in control we feel, the more motivated we are; conversely, the less control, the less motivated. Thus, our explanations, or causal attributions, for why we succeed and fail directly affect our motivation because they imply that our academic performance is either controllable or uncontrollable. So, when "lack of ability" (low intelligence) or "poor instruction" are deemed to be the cause of failure, attributions which are not controllable by us and are stable, we experience a loss of control which, in turn, leads to low motivation and weak performance.

In contrast, "lack of effort," "bad strategy," or "poor note-taking," are all controllable and changeable causes of failure. They can be altered by trying harder, using a better strategy, or taking clearer notes, thereby enhancing perceived control and strengthening motivation and performance. Controllable attributions give students a greater sense of personal control over academic performance, and in turn, more motivation to achieve; uncontrollable attributions engender less personal control and less motivation to succeed. Thus, differences in perceived control result from the three dimensional properties of attributions acting together

such that an internal, stable, and uncontrollable attribution (ability) for failure would lead to a loss of perceived control, whereas an internal, unstable, and controllable attribution (effort) for the same failure would enhance perceived control.

In sum, perceived academic control is a function of causal attributions which provide students with the specific reasons for various achievement outcomes. Weiner's theory explicitly describes the cognitive, affective, and motivational consequences of controllable and uncontrollable attributions which underpin students' belief patterns of perceived control. Weiner's attribution theory is particularly well-suited for deriving manipulations, measures, and predictions related to academic performance and has several major advantages for studying linkages between academic markers and teaching and learning processes: a primary emphasis on achievement; a broad range of cognitive, affective, and motivational outcomes; and, a clearly delineated framework for testing their sequential developments. This explicit sequencing of variables lends itself to unraveling the complexities underpinning perceived academic control and the scholastic attainment of college students.

The remainder of the chapter is devoted to two main themes: first, that perceived academic control is a critical individual difference in students (academic marker) affecting their scholastic attainment; and secondly, that Attributional Retraining (AR), designed as a cognitive intervention to enhance students' academic control, can be viewed as an instructional treatment that positively influences achievement motivation and performance.

#### ACADEMIC CONTROL IN ACHIEVEMENT SETTINGS

Thus far, the chapter has dealt with the conceptual foundation of perceived control within higher education settings. We shift now to focus on student differences in academic control and how they affect the motivation, performance, and overall scholastic development of college students. In the process, we examine other academic differences among students, such as course-related emotions and perceptions of success, that interact with perceived control to enhance or impede academic motivation and achievement striving. Finally, we consider students' academic control in relation to classroom instructional practices as a form of an aptitude-treatment interaction (Cronbach and Snow, 1977).

ACADEMIC CONTROL IN ELEMENTARY AND HIGH SCHOOL STUDENTS

Beginning in the early school years through to high school, perceived academic control has been found to positively affect several aspects of students' educational development (Musher-Eizenman, Nesselroade, and Schmitz, 2002; Stipek and Weisz, 1981; Yamauchi, Kumagai, and Kawasaki, 1999). For example, in a series of studies conducted by Skinner and her colleagues (e.g., Skinner, Wellborn, and Connell, 1990; Skinner *et al.*, 1998), school-age children's achievement and perceived control were found to be reciprocal in nature: greater perceptions of control enhanced subsequent academic achievement, and achievement, in turn, enhanced perceptions of control over future academic outcomes. Moreover, children who had teachers described as warm and contingent were more likely to develop optimal profiles of control that emphasized internal causes, resulting in greater classroom engagement and achievement. Conversely, unsupportive teaching was associated with less perceived control, which predicted academic apathy and lower achievement. These findings indicate that teachers can actively shape children's control beliefs and academic motivation by providing a warm and contingent learning environment (Clifton and Roberts, 1992; Skinner *et al.*, 1990).

Other research involving school-age children reveals that greater academic control enables children to understand course content better and use more effective learning strategies (Yajima, Sato, and Arai, 1996). These benefits of academic control are not limited to the general school population, but extend to learning-disabled children as well. Specifically, perceived control can enhance achievement motivation among children with learning disabilities or those who are at risk academically (Dev, 1998). Dicintio and Gee (1999), for example, found that among unmotivated students who were deemed to be at risk academically, perceived control was associated with greater task involvement and feelings of competency, and conversely, with less boredom, confusion, and interest in doing other things. Thus, even among school-age children who experience academic failure due to learning or motivational difficulties, perceived control can improve their educational development.

Of note, perceived control may be more critical than other factors previously thought to influence children's scholastic development. In a longitudinal study, Ross and Broh (2000) examined both perceived control and self-esteem among 10th grade children in an attempt to determine which individual difference factor was a stronger predictor of academic achievement in grade 12. While prior academic achievement

and parental support assessed in grade 8 enhanced both self-esteem and perceived control in grade 10, only perceived control influenced subsequent academic achievement in grade 12. Similar results were found by Leondari and Gialamas (2000), where high perceived control was associated with better performance and no direct link was found between self-esteem and achievement. Together, these findings show that perceived control can be more critical than self-esteem to students' academic achievement. More generally, the research findings in K-12 students point to the significance of perceived control for their overall academic development and serve to highlight its potential importance for college students. Notably, levels of perceived control do appear to increase somewhat from one grade to the next, but then stabilize during high school. And because intellectually capable high school students are most likely to advance to college (Rotter, 1975; Stipek and Weisz, 1981), perceived academic control is likely to play a larger role in their scholastic development in college than in high school (Cassidy and Eachus, 2000; Perry, 2003).

#### ACADEMIC CONTROL IN COLLEGE STUDENTS

Although perceptions of control over academic outcomes are important for school-age children, they may be even more critical for students making the transition from high school into college. At this critical point in their lives, college students are free to pursue various career options; parental authority and influence are reduced, as are relationship or familial restraints — all of which enhance students' focus on autonomy and independence, more so than in primary, middle, or secondary school. At the same time, college students must assume responsibility for their education and contend with a greater emphasis on academic competition and success. It is also during this transition phase that a stronger tie develops between self-concept and achievement, so that one's identity is linked to one's academic performance (Perry, 1991).

Because perceived control over academic-related outcomes is especially crucial to college students' scholastic success, this transitional period from high school into college can be particularly problematic to the extent that it constitutes a low-control learning environment (Perry, 2003). Low-control situations are not uncommon within the education system, particularly when certain grades or transition years are infused with a disproportionate number of unpredictable achievement events or

episodes. The first year of college is notable in this regard because it can undermine students' efforts to gain a sense of control and autonomy by repeatedly exposing them to novel and unexpected experiences such as increased emphasis on performance, heightened competition, pressure to excel, more frequent failure, unfamiliar academic tasks, new social networks, and critical career choices (Perry, 1991, 2003).

Thus, while perceived academic control is key to success in college, maintaining that sense of control presents an enormous challenge to first-year college students in particular. Students who have a higher sense of academic control are more likely to conquer many of the challenges presented to them in their first year of college because they believe the onus is on them to invest more effort, to adjust their study strategies, and to seek assistance from their instructors as needed. In contrast, students with a lower sense of academic control often feel utterly helpless when faced with the daunting challenges of their first year at college. We have chosen to focus on this struggle to maintain a sense of control in low-control situations faced by college students, and in research conducted in both laboratory and field settings, we have consistently found that academic control benefits first-year college students in terms of their academic-related emotions, cognitions, motivation, and achievement. The following sections review this research, and consequently, address one of the fundamental questions posed at the beginning of this chapter concerning the positive impact of academic control on student scholastic development.

### *Emotional Consequences*

Academic control has been found to positively influence college students' emotional experiences in their courses. Schönwetter, Perry, and Struthers (1993), for example, showed that academic control affected students' achievement-related emotions in their introductory psychology course wherein students with greater levels of control felt more pride and less shame concerning their course performance compared to students with less control. Aside from shame, other negative course-related emotions are also minimized by academic control, as seen in Perry *et al.*'s (2001) study in which high-control students reported less course-related anxiety and boredom than their low-control counterparts. Research by Wise and colleagues (Wise, 1994; Wise, Roos, Leland, Oats, and McCrann, 1996; Wise, Roos, Plake, and Nebelsick-Gullett, 1994) revealed that students' desire for control within testing situations,

coupled with a greater sense of control over the situation, was associated with less test anxiety. Similarly, students who have a greater sense of control over questions that would be potentially included on their introductory psychology tests experience less stress than students who feel they have no control over the test questions (DasGupta, 1992). Thus, perceptions of control over course exams and other academic outcomes can enhance both the positive emotions *and* reduce the negative emotions that students experience toward their college courses.

#### *Cognitive and Motivational Consequences*

In addition to influencing their academic-related emotions, perceived control also enhances students' cognitive and motivational experiences within the college setting. Academic control can bolster achievement motivation so that high-control college students put more effort into academic tasks, are more motivated to learn, believe they are more successful in their courses (Perry *et al.*, 2001), and are more likely to persist in their college courses than students with less control (Ruthig, Hladkyj, Hall, Pekrun, and Perry, 2002). Furio (1987) also found that higher perceptions of control were associated with increased learning and motivation to work and study. Finally, research by Cassidy and Eachus (2000) showed that students with higher academic control engaged in more effective study strategies involving time management and organization, which in turn, predicted better academic achievement.

In the realm of metacognitive strategies, academic control is positively associated with cognitive elaboration and self-monitoring. High-control students tend to engage in more cognitive elaboration strategies such as finding common themes throughout their courses and relating new course material to prior knowledge, as well as active learning and more self-monitoring (i.e., capacity to determine how well they understand course material) than their low-control counterparts (Cassidy and Eachus, 2000; Perry *et al.*, 2001). Taken together, these research findings indicate that perceptions of academic control contribute significantly to students' emotional, cognitive, and motivational experiences during their college education.

#### *Achievement Consequences*

Aside from these affective and cognitive benefits, academic control positively influences students' academic performance in terms of class tests, assignments, and final grades in college courses. For example, in

a one-year longitudinal field study involving academic control, we found a dramatic difference between high- and low-control students in their final introductory psychology course grades. Students with a greater sense of academic control at the start of the year obtained a final grade of B+ in the course at the end of the year, in comparison to their low-control counterparts who obtained a C+ (Perry *et al.*, 2001). This variation in students' perceptions of control resulted in a performance difference of roughly two letter grades. Our academic control research has included both single-course achievement measures (i.e., final course grades) and performance indicators from all courses in which students enroll over an entire academic year, namely cumulative grade point average (Hall, Perry, Ruthig, Hladkyj, and Chipperfield, 2005; Ruthig, Hladkyj, Perry, Clifton, and Pekrun, 2001). In these longitudinal studies involving large, diverse samples, high-control students had greater overall GPAs than low-control students, providing evidence that academic control benefits student achievement, both at the course-specific level ( $r = .18$ ) and across numerous courses and different classroom situations ( $r_s = .18-.25$ ).

In addition to academic performance, we have examined the relation between academic control and college persistence as reflected in students' intentions to remain in or withdraw from these courses. Ruthig *et al.* (2002), for example, showed that academic control significantly predicted persistence in an introductory psychology course, where the more academic control students felt they had at the beginning of the term, the less likely they were to subsequently drop their introductory psychology course. In keeping with this focus on cumulative measures of academic achievement, our recent research efforts have examined the effects of perceived academic control on attrition from students' cumulative voluntary withdrawal from all courses taken during the academic year. To this end, Hall, Perry, Ruthig, Hladkyj, *et al.* (2005) found that students with higher levels of perceived academic control were also less likely to withdraw from other courses during their first year of college than were low-control students. Thus, academic control not only contributes to better achievement in first-year courses, it also increases students' persistence in those courses (e.g., Ruthig *et al.*, 2005; Perry *et al.*, in press).

In studying the effects of academic control on first-year achievement and persistence we have controlled for aptitude differences in students. A confound can arise when the relationship between academic success and control is reciprocal: academic success promotes academic control which, in turn, fosters academic success. For instance, high-aptitude



students are more successful and their successes contribute to higher levels of perceived control (e.g., Barling and Snipelisky, 1983; Edmonds, 2003; El-Hindi and Childers, 1996; Yan and Gaier, 1991). Accordingly, a measure of high school performance is routinely included as a covariate in our analyses to account for potential differences in aptitude upon entering college. Thus, we can be confident that differences in academic performance after the first year of college are less likely due to preexisting differences in high school aptitude.

Because our research is based on Canadian university students who are not required to write SATs, we have relied on other measures of high school aptitude. High school achievement has been assessed using self-reported high school grade, a subjective average of students' grades in their final year of high school, which correlates strongly with students' final course grades in college,  $r_s = .39-.54$  (e.g., Hall, Perry, Chipperfield, Clifton, and Haynes, in press; Perry *et al.*, 2001). We have also incorporated a more objective measure of high school aptitude as a covariate in our analyses, namely students' actual high school percent, calculated by averaging students' final grades in their college entrance courses (e.g., Hall, Hladkyj, Perry, and Ruthig, 2004; Ruthig, Perry, Hall, and Hladkyj, 2004). Thus, by incorporating a measure of high school aptitude, whether self-reported or actual grades, we have been able to distinguish achievement differences in college due to academic control perceptions from those due to prior aptitude in high school.

#### ACADEMIC CONTROL AND OTHER INDIVIDUAL DIFFERENCES

Although academic control has a variety of positive benefits for college students, the consequences are not always straightforward because other individual differences among students may actually enhance or nullify the effects of academic control. Within our own research program, we have examined differences in the emotional and cognitive experiences of students in relation to their perceptions of control to determine how they jointly impact scholastic development. Ruthig *et al.* (2005), for example, explored whether certain achievement-related emotions, namely enjoyment, boredom, and anxiety, moderated the effects of academic control on scholastic performance and persistence. At the start of the academic year, students were identified as having either low or high academic control and low or high levels of learning-related enjoyment, boredom, and anxiety. An academic control (low/high control)  $\times$  learning emotion (low/high emotion)  $2 \times 2$  factorial design

was used to examine the effects on students' introductory psychology course grade, overall cumulative GPA, and cumulative course withdrawal.

Positive emotions appeared to "enable" academic control to increase students' course grades and GPAs and decrease their course withdrawal. Conversely, negative emotions seem to "disengage" the positive impact of perceived control. Specifically, high-control students who reported high levels of course enjoyment (or low levels of course boredom or anxiety), had the highest final psychology course grade, cumulative GPA, and lowest attrition rates. However, among students with low enjoyment, having high control did not significantly impact their academic development, such that low- and high-control students had similar achievement and attrition levels. Similarly, for students with high boredom or anxiety, high control did not enhance academic achievement or persistence, meaning that low- and high-control students again had comparable levels of achievement and attrition. These findings indicate that various negative emotional states (e.g., high boredom, high anxiety, low enjoyment) can eliminate the advantageous effect of high academic control. Thus, it is in combination with more favorable emotional experiences in the classroom, either stronger positive emotions or weaker negative emotions, that students' perceptions of academic control foster achievement striving, performance, and persistence in their courses.

In keeping with our phenomenological focus on academic control, we have also examined perceptions of academic success as an important student difference, which potentially can modify the effects of academic control on scholastic performance. Weiner's attribution theory (1985, 1995) asserts that subjective evaluations of academic performance outcomes are an important precursor to causal search, which in turn, has a significant effect on students' perceptions of controllability concerning their course grades. Schönwetter *et al.* (1993) found that students' perceptions of success interacted with their academic control so that students with high control/high success had the highest level of achievement out of the four possible combinations of perceived control, (low/high) and success (low/high). Interestingly, students with low control and high perceived success demonstrated the poorest academic performance, followed by students with high control and low perceived success. These seemingly counterintuitive findings may be explained by the fact that low-control/high-success students believe that, although they are successful, they do not have control over academic outcomes. In contrast, high-control/low-success students believe they have control, yet see themselves as unsuccessful. These findings indicate that, similar

to research on academic control and emotions, perceived control and success can interact to predict achievement, thereby providing a valuable perspective on the role of academic control in relation to other individual difference variables. Hence, it is often not adequate to examine academic control or perceptions of success alone when attempting to determine academic achievement. Rather, perceptions of both control and success are necessary for optimal academic performance.

Self-regulation is another individual difference among college students that has been considered in combination with academic control. Defining self-regulation as preoccupation with failure or persistent focusing on negative events, Perry *et al.* (2001) found that students with both high preoccupation with failure and high academic control obtained better course grades than students with low preoccupation with failure, regardless of their control level. Although being preoccupied with failure would appear negative at first glance, high-control, high-failure-preoccupied students outperformed the other three groups by two full letter grades in their introductory psychology course. When paired with a sense of control over academic outcomes, students with high failure preoccupation are able to give sufficient attention to monitoring and assessing the causes of failure, and thus more likely to prevent the recurrence of failure. Again, this research highlights the importance of evaluating the benefits of perceived academic control in the context of other individual differences, in this case, involving students' self-regulatory capacity to maintain their focus on and overcome academic failure experiences.

The academic control by failure preoccupation findings from Perry *et al.* (2001) were replicated and extended in a three-year longitudinal study designed to examine the generalizability of this interaction (Perry *et al.*, in press). A similar interaction pattern was found for grade point average (GPA) and voluntary course withdrawal across three academic years. That is, high academic control, high failure-preoccupied students had better GPAs and had dropped fewer courses after three years than the other three groups. These results provide stronger and consistent support for how self-regulation variables such as failure preoccupation can interact with academic control to affect college students' achievement and persistence over a prolonged period.

The empirical evidence presented so far highlights the importance of academic control in the scholastic development of college students. Student differences in control perceptions, often interacting with other academic factors, can translate into significant disparities in learning-related cognitions, emotions, motivation, and performance.

Consequently, our analysis of the academic development of college students would not be complete without including a central contextual determinant of classroom settings, namely quality of instruction. Both logic and empirical evidence suggest that teaching is very important to the motivation and performance of college students, yet social cognition researchers often omit instructional variables from their studies. In most studies, teaching is simply assumed to be a random background variable and the focus is primarily on student attributes as predictors of learning and performance (cf., Aspinwall and Taylor, 1992; Pascarella and Terenzini, 1991). In the next section, we explore the consequences of this association between academic control and the quality of college instruction.

#### ACADEMIC CONTROL AND QUALITY OF INSTRUCTION

In response to increasing attrition in postsecondary institutions, stakeholders argue that the panacea for failing students — and any other plight afflicting higher education today — is “to have the professors teach better”! This commonly held “one size fits all” effective-teaching remedy is supported, in part, by extensive research during the past 80 years showing that students do benefit from effective college teaching (cf., Feldman, 1998; Marsh and Dunkin, 1992; McKeachie, 1997; Murray, 1991; Perry and Smart, 1997). While this evidence is supportive, it is incomplete because research also shows that certain students do not profit from effective instruction, notably those low in perceived academic control (Perry, 1991). A profile of learned helplessness (low motivation, negative affect, and poor performance), characteristic of failure-prone students, can occur despite the presence of effective instruction. Simply put, the students most in need of enriched educational opportunities (e.g., effective teaching) are least likely to profit from them.

Faculty members are concerned not just with teaching more effectively, but with how certain teaching methods affect students differently, specifically with which methods are most effective for certain types of students (Perry, 1997). When meeting a class for the first time, college instructors are often confronted with pronounced differences between students. Race, gender, age, social class, ethnicity, and religion are but a few overt signs of that diversity, augmented by less apparent, but equally important differences in intelligence, motivation, impulsivity, and boredom. Alongside enthusiastic, determined, and responsible students sit apathetic, bored, and failure-prone students, intermingled with still

others possessing various attributes of the first two groups. Not surprisingly, this complex diversity represents a fundamental challenge for college instructors who must ensure that learning opportunities are optimized for all students. This issue highlights the differential impact that a certain teaching method can have in relation to specific attributes that vary between students, generally referred to as an aptitude-treatment interaction (Cronbach and Snow, 1977). This section deals with this aptitude-treatment interaction in terms of academic control and effective teaching in college classrooms.

### *Effective Teaching in College Classrooms*

It has long been recognized by classroom instructors, students, and policymakers alike that some teaching methods are more effective in promoting learning and performance. The common wisdom that “teaching makes a difference in college classrooms” is supported by correlational and causal evidence from laboratory and quasi-experimental studies dating back over 80 years. The correlational evidence consistently reveals that specific college teaching behaviors associated with lecturing, such as organization, knowledge, clarity, and expressiveness, are directly related to better student performance. In a prototypical study, Sullivan and Skanes (1974) randomly assigned students and instructors to multiple sections of an introductory psychology course at the beginning of year, and at the end of year students evaluated their instructors on a standard questionnaire. Student ratings were moderately correlated with course grades based on tests prepared by instructors from all sections. The student ratings/final grades correlation was .42 for all instructors combined, and .60 for senior instructors.

Meta-analytic reviews of multi-section validity studies (e.g., Cohen, 1981, 1983; Feldman, 1989) show that specific college teaching behaviors, defined in terms of student ratings, are significantly correlated with end-of-term final grades. Instructor organization, for example, defined by items such as “presents and organizes course material” and “plans class activities in detail,” is correlated .55 with end-of-course final grades. This means that roughly 30% of the achievement variance in final grades is explained by instructor organization. Instructor clarity, denoted by such items as “makes good use of examples of illustrations” and “synthesizes and summarizes the material” is correlated .51 with final grades, and consequently accounts for 25% of the variance in course grades. Student ratings of instructor interaction, feedback, stimulation,

and elocution are correlated .45, .29, .38, and .35 respectively with final grades. Clearly then, empirical evidence from correlational studies supports the position that teaching does make a difference to scholastic attainment in college classrooms.

To put these teaching behaviors/final grades correlations in perspective, consider construct validity studies in other research domains. In a comprehensive review of more than 125 meta-analytic validity studies, Meyer *et al.* (2001) analyzed 800 samples using multimethod assessment procedures. In Table 1 of their study, they present small and large correlations between well-established variables in the health domain: aspirin and reduced risk of death by heart attack,  $r(22,071) = .02$ ; antihypertensive medication and reduced risk of stroke,  $r(59,086) = .03$ ; calcium intake and bone mass in premenopausal women,  $r(2,493) = .08$ ; gender and weight for U.S. adults,  $r(16,950) = .26$ ; weight and height for U.S. adults,  $r(16,948) = .44$ .

In another set of analyses, Meyer *et al.* (2001, Table 2) report validity coefficients for various types of physical and psychological tests, including: fecal occult blood test screening and reduced death from colorectal cancer,  $r(329,642) = .01$ ; ultrasound examinations and successful pregnancy,  $r(16,227) = .01$ ; decreased bone density and hip-fracture risk in women,  $r(20,849) = .25$ ; mammogram results and breast cancer detection after two years,  $r(192,009) = .27$ ; extraversion and subjective well-being,  $r(10,364) = .17$ ; Graduate Record Exam (quantitative) performance and graduate GPA,  $r(5,186) = .22$ ; neuroticism and decreased subjective well-being,  $r(9,777) = .27$ ; information processing speed and reasoning ability,  $r(4,026) = .55$ .

In relative terms, the teaching behaviors/final grades correlations compare favorably to those involving commonly known psychological and medical tests in other areas of research. Correlations between .20 and .55 for teaching behaviors (e.g., instructor organization or clarity) and final grades are similar to correlations involving GRE/GPA (.22), mammogram/breast cancer (.27), weight/height (.44), and information processing/reasoning (.55), and are substantially higher than widely-accepted correlations for aspirin intake/reduced heart attacks (.02), blood pressure medication/reduced risk of stroke (.03), and extraversion/well-being (.17). Furthermore, teaching behavior correlations between .20 and .55 are statistically meaningful according to Cohen (1988) who considers correlation coefficients below .10 of little interest, but between .10 and .20 as small, .20 and .40 as moderate, and above .40 as large. In practical terms, this means that college teaching behaviors such as instructor organization or instructor clarity can explain roughly 25% of

final grades in a course, and have an effect size that is of the same magnitude as widely recognized associations between intelligence tests and performance (e.g., GRE/GPA = .22) and height and weight (.44).

### *Academic Control and Effective Teaching*

We turn now to how instructional treatments in relation to academic control affect the scholastic development of college students. Instructional treatment is broadly defined here as a systematic application of pedagogical methods and procedures to facilitate learning and performance which would include lecture-related teaching behaviors, course structures, grading standards, and curriculum design, though all may not occur in a single teaching episode, nor be used by a specific instructor. We focus on lecturing because it has been the subject of extensive empirical investigation that shows it is typically comprised of several discrete teaching behaviors, namely expressiveness, organization, clarity, etc. (cf., Perry and Smart, 1997). Our interest is in instructor expressiveness as a teaching behavior because it is a key element of the lecture method and has received detailed scrutiny in both laboratory and field settings (e.g., Murray, 1991, 2001; Perry, Abrami, and Leventhal, 1979; Perry, Leventhal, and Abrami, 1979).

Our analysis of the relation between academic control and college teaching takes an aptitude-treatment interaction approach (cf., Cronbach and Snow, 1977) in which the quality of college instruction interacts with either transient or stable academic control. In a series of analog studies of the college classroom (cf., Perry, 1991), teaching effectiveness was examined in terms of the lecture method which is made up of specific teaching behaviors such as instructor expressiveness, organization, and clarity (cf., Feldman, 1989; Murray, 2001), recognizing that college teaching encompasses a variety of teaching methods. Transient academic control is deemed to be a component of perceived academic control determined by the college classroom, as opposed to the student, the result of episodic events which create low- and high-control learning environments. Low-control classrooms are those which are infused with unpredictable, noncontingent associations between students' achievement-striving behaviors and subsequent performance outcomes, creating a helpless orientation in students. High-control classrooms are those which involve contingent relations between achievement behavior and performance, thereby encouraging a mastery orientation in students. Stable academic control is an attribute of students which they bring to



the classroom separately from the transient control aspects of the classroom setting.

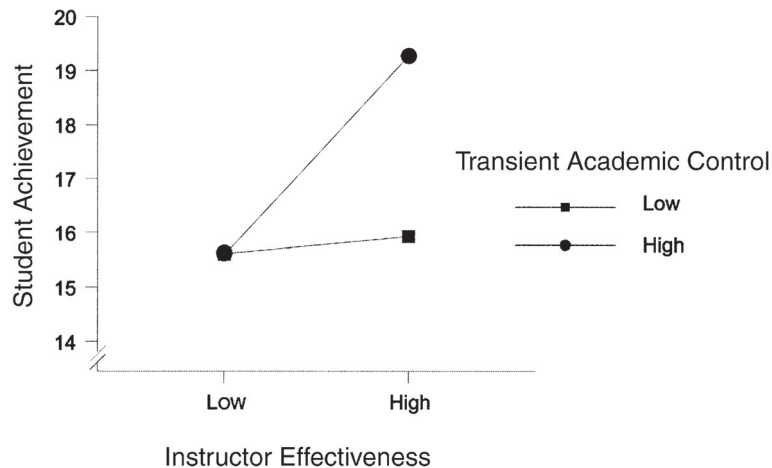
The laboratory analog is an improvement over correlational studies of college teaching which have not systematically manipulated the quality of teaching directly and which have not tested cause-effect relations between teaching and learning. It is also an improvement over studies in the social cognition literature which have virtually ignored the role of teaching variables in exploring academic motivation and achievement-striving. Based on previous research using this classroom analog (Perry, Abrami, and Leventhal, 1979; Perry, Leventhal, and Abrami, 1979), we paired either transient or stable academic control (low, high) with videotape lectures varying in the quality of instruction (ineffective, effective) within a  $2 \times 2$  factorial design.

In one study, transient academic control was manipulated using falsified test performance results prior to the videotape lecture to create either a transient low-control (unpredictable failure feedback), or high-control (predictable failure feedback) experience for students (Perry and Dickens, 1984). Aside from the transient control main effect, a transient control  $\times$  instructional quality interaction emerged. Not unexpectedly, transient high-control students who received effective instruction performed better on the post-lecture test compared to their low-control counterparts who received ineffective instruction. Converting the performance of high-control students to a percentage scale reveals that their achievement is 12% better with the effective, compared to the ineffective instructor, which translates into almost a one and a half letter grade difference. More interestingly, however, low-control students did not do any better with the effective instructor than with the ineffective instructor.

In subsequent research, we found that this interaction was not limited to a brief, single-lecture episode, but extended to a second lecture one week later (Perry and Magnusson, 1987). After students participated in the first lecture, they returned to the laboratory a week later to view a second videotape lecture and to take a test on the lecture material. In both Lecture 1 and Lecture 2, transient high-control students performed better following effective instruction, compared to ineffective instruction, whereas low-control students did no better following effective instruction. The basic form of the transient academic control  $\times$  instructional quality (aptitude-treatment) interaction has been consistently replicated in other studies as well (Perry and Dickens, 1987; Perry, Magnusson, Parsonson, and Dickens, 1986) and is seen in Figure 7.1. Consistent with the research literature on college teaching, the effective instructor



**Figure 7.1:** Academic control  $\times$  instruction interaction effect, adapted from Perry and Magnusson (1987). Transient control assessed: low academic control = noncontingent feedback; high academic control = contingent feedback



produced more learning than the ineffective instructor, but only for transient high-control students. For transient low-control students, having effective instruction produces no better performance than having ineffective instruction. Consequently, students who are at risk and failure prone (low control) do not benefit from enriched learning experiences (effective instruction).

In extending these transient academic control  $\times$  instructional quality interaction findings, Magnusson and Perry (1989) paired stable academic control with quality of instruction (ineffective, effective). Stable academic control was measured in terms of locus of control (internal, external), wherein internal locus implies stable, high academic control and external locus reflect stable, low academic control. The aptitude-treatment interaction previously found for transient academic control was replicated for stable academic control and instructional quality as well. Internal-locus (high-control) students learned more from the effective compared to the ineffective instructor, even when they experienced a temporary loss of control. External-locus (low-control) students, however, did not perform better following effective instruction. Once more, those students most at risk were least likely to benefit from optimal (effective teaching) learning conditions.

Taken together, these simulated classroom laboratory studies indicate that student differences in experiencing *transient* low and high academic control have important implications for the effectiveness of

classroom instruction. If such experiences are inherent to low-control situations, the first year of college being a prime example, then good teaching facilitates performance only in students who have a temporary increase in their sense of control. Good teaching, however, is of no avail to students who experience a temporary loss of control: they performed equally poorly whether they received effective or ineffective instruction. This same pattern of results was replicated for *stable* academic control, as well, in which high-control students did better after receiving effective instruction, yet their low-control counterparts did not. Paradoxically then, and contrary to common wisdom, students who are most in need of academic assistance are *least* likely to benefit from effective teaching.

#### WHEN GOOD TEACHING FAILS: PRIMARY AND SECONDARY ACADEMIC CONTROL

To this point, we have argued that both academic control and effective instruction can greatly enhance college students' academic development. Unfortunately, effective teaching can fail to foster achievement striving for either low-control students or students who experience temporary, environmentally-induced losses of control. What then keeps such students from simply giving up and withdrawing from college altogether? A possible explanation is that some low-control students possess certain cognitive capabilities that allow them to avoid feeling completely helpless in low-control learning environments and to persist in their academic endeavors. One such cognitive factor that has become a major focus in our own research is *secondary* academic control, a type of perceived control which is distinct from the traditional concept of academic control discussed thus far, namely *primary* academic control. In general, primary control refers to attempts by students to directly influence outcomes in academic settings, such as performance on achievement tests. In contrast, secondary control involves attempts by students to adjust to academic challenges involving failure, noncontingent feedback, lack of information, or unpredictability (Rothbaum *et al.*, 1982).

To maintain a sense of control within low-control achievement settings, some students resort to secondary control beliefs and strategies involving the cognitive reconstrual of negative learning experiences. Having failed a test, for example, secondary control strategies may include focusing on the positive aspects of the experience (e.g., "My performance helped me see where I can improve"), downgrading its

importance (e.g., “The test is only worth 20% of my grade”), or downward social comparisons (e.g., “At least I did better than some of the other students”). Conversely, primary control involves attempts to modify external outcomes to attain or regain desired goals (Heckhausen and Schulz, 1998; Rothbaum *et al.*, 1982). For example, if the desired goal is to pass an exam, primary control strategies may include taking lecture notes, asking the instructor for assistance, or participating in a study group.

Hladkyj, Pelletier, Drewniak, and Perry (1998) designed a measure of secondary academic control to assess students’ attempts to adjust to the many control-eroding episodes experienced during their first year of college, a typically low-control transition period. This measure was derived from Rothbaum *et al.*’s (1982) two-process model of perceived control where, in addition to primary control, individuals may maintain an overall sense of control by reinterpreting uncontrollable events to make them less negative. Using this conceptual model, Hladkyj, Pelletier, *et al.* devised a 7-item Likert-style measure of secondary control (e.g., “When bad things happen to me, I make an intentional effort to understand how they fit into the rest of my life”) which was positively correlated with elaborative learning ( $r = .36$ ), self-monitoring ( $r = .18$ ), intrinsic academic motivation ( $r = .19$ ), course enjoyment ( $r = .24$ ), feelings of success ( $r = .14$ ), and end-of-year feelings of adjustment to college ( $r = .16$ ). Although the magnitudes of some of the effect sizes are relatively small, they indicate a systematic involvement of secondary control in supporting greater academic engagement and adjustment to the college experience.

Subsequent research (e.g., Hladkyj, Perry, and Pelletier, 2000; Hladkyj, Taylor, Pelletier, and Perry, 1999) involved both examining how this new measure corresponds with students’ adjustment to their first year of college and how it relates to a more domain-specific measure of secondary academic control. In a multi-sample study involving data obtained from 3,973 introductory psychology students from five separate cohorts (1996, 1997, 1998, 2000, and 2001), higher levels of secondary control were associated with greater academic mastery ( $r = .31-.36$ ), metacognitive engagement ( $r = .32-.44$ ), and adjustment to college ( $r = .12-.16$ ), and was positively correlated with a domain-specific measure of secondary academic control ( $r = .32-.38$ ) across three different samples of first-year college students (Hladkyj, Perry, Hall, Ruthig, and Pekrun, 2003).

Together, this research suggests that secondary control protects students from threats to their primary academic control, but not without

some cost. Specifically, when faced with excessive failure during their first year of college, high secondary-control students exhibited a mastery orientation in their achievement-related cognitions, emotions, and strategies, similar to high primary-control students, yet their course grades were no different from low secondary-control students. Thus, by changing their *internal* reality, secondary control may limit students' effectiveness to influence the *external* situation to their favor. Moreover, other research (Hall, Perry, Ruthig, Hladkyj, and Chipperfield, 2005; Hall *et al.*, in press) indicates that there is virtually no relation between secondary control and achievement in terms of final grades ( $r = -.08$  to  $.01$ ) or GPA ( $r = -.07$ ), suggesting that having greater secondary control is not advantageous in terms of academic performance.

Given that primary or secondary control can alleviate the negative effects of feeling out of control, is it more beneficial to perceive oneself as having high levels of *both* types of academic control? Hall, Perry, Ruthig, Hladkyj, *et al.* (2005) found that it is indeed optimal to have high levels of both types of academic control. Specifically, unsuccessful students with high primary and high secondary control had higher cumulative GPAs, lower course attrition, higher expected academic success, lower stress, and more positive learning-related affect (i.e., pride, happiness, anger) compared to students with high primary but low secondary control. In fact, the combination of high primary and low secondary control may actually put students at risk academically if they are initially unsuccessful in their first year of college. Hall, Perry, Ruthig, Hladkyj, and Chipperfield (in press) explain that the positive consequences of relying only on primary control may be limited to successful students, and do not occur among students experiencing repeated failure. These findings for secondary control provide further evidence of the importance of investigating the effect of (primary) academic control on achievement with respect to other individual difference variables (see Academic Control and Other Individual Differences). Fortunately, high primary-/low secondary-control students who are initially unsuccessful in college tend to benefit academically from Attributional Retraining, a cognitive intervention technique which is aimed at changing students' maladaptive attributions for their academic performance (e.g., Hall *et al.*, in press). This intervention strategy is discussed in detail in a subsequent section of this paper.

Further research by Hall, Hladkyj, Ruthig, Pekrun, and Perry (2002) provides an explanation for why students with high levels of both primary and secondary control are more successful than their counterparts who have different combinations of primary and secondary control.

Hall, Hladkyj, Ruthig, *et al.* posit that students who are high in both types of control are in the enviable position of maximizing their sense of control if they are able to “switch” their emphasis from one type of control to the other as necessary. For instance, in failure situations when primary control is low, if these students are able to switch over to rely more on secondary control strategies, then they would retain or regain a sense of control in the situation. Thus, having high levels of both types of academic control allow students to retain their overall sense of control if they can switch their control orientations as they negotiate their way through the many challenges presented in the college setting (e.g., Hall, Hladkyj, Chipperfield, and Perry, 2002; Hall, Hladkyj, Chipperfield, and Stupnisky, 2003).

Based on this body of research showing academic control to be a considerable asset for academic adjustment and performance in the context of higher education, it follows that increasing perceptions of control in low-control students should produce consequent favorable outcomes. To assist in the ongoing effort to increase perceptions of academic control and achievement in college students, motivational researchers have developed a control-enhancing instructional treatment, referred to as Attributional Retraining, which consistently results in improved academic motivation and performance for low-control students. Unlike traditional teaching methods involving quality of instruction, this remedial psychotherapeutic treatment based on Weiner’s attribution theory (1985, 1995) represents an effective means of improving academic development in these otherwise disadvantaged students by encouraging them to reflect on the controllable nature of failure experiences. The following section provides an overview of previous and recent research on attributional retraining in college students, and discusses in greater detail how this treatment is administered and how it interacts with student differences in academic control to impact academic achievement.

#### ATTRIBUTIONAL RETRAINING: A CONTROL-ENHANCING INSTRUCTIONAL TREATMENT

To this point in our discussion, we have focused on the first set of research questions posed at the start of this chapter: whether perceived academic control, as an individual difference, directly affects achievement motivation and scholastic performance; and, whether the effects of academic control vary depending on other individual differences and the

quality of instruction in college classrooms. As we have seen, the empirical answer to these questions is unequivocally affirmative. Despite the abundance of positive empirical findings demonstrating the efficacy of certain teaching methods, the evidence presented here consistently shows that what is deemed to be effective instruction is not beneficial to all students (Perry, 1991, 2003). Specifically, students who have lower academic control do poorly, despite receiving high-quality instruction (see Figure 7.1). Ironically then, it is the most vulnerable college students who do not benefit from enriched instructional treatments. If traditional teaching methods like lecturing are not effective for certain students such as those low in academic control, then other, more effective instructional treatments must be considered.

For over 15 years, we have examined an educational treatment intervention designed to enhance perceived academic control based on Weiner's attribution theory (1985, 1995), referred to as *Attributional Retraining (AR)*. The AR intervention modifies dysfunctional causal attributions for academic performance to attributions that are more conducive to achievement motivation and performance. Specifically, AR is a control-enhancing teaching method that replaces dysfunctional attributions for success and failure with functional attributions, and as such, complements traditional teaching methods such as lecturing. The relation between academic control and college instruction is examined in the following sections in terms of AR which is intended primarily for low-control students. In addressing this academic control-AR combination, we view AR as a type of instructional treatment in keeping with other aptitude-treatment interactions described earlier involving academic control-instructional quality interactions.

As discussed in previous sections, the first research question concerning academic control-instructional quality interactions was addressed by examining the effectiveness of lecturing (treatment) for low- and high-control students (aptitude) and was tested using an academic control  $\times$  quality of lecturing interaction (Perry, 1997). This aptitude-treatment interaction is confirmed if high-control students performed better when receiving effective, as opposed to ineffective instruction and low-control students show no comparable improvement following effective instruction. However, in addressing our second research question involving an instructional treatment specifically intended to enhance academic control in low-control students, a different pattern of findings would be expected. That is, following the control-enhancing AR treatment, low-control students should perform better compared to their low-control/no-AR treatment counterparts, without

similar treatment gains occurring for high-control students. The remainder of this section explores the effectiveness of AR techniques in college classrooms and whether this control-enhancing AR instructional treatment can be of benefit to low-control students.

#### ATTRIBUTIONAL RETRAINING: AN OVERVIEW

Research consistently shows that effective instruction in higher education positively influences student development with respect to achievement, emotions, and motivation (Perry and Smart, 1997). However, this research also indicates that a pattern of low perceived control, negative affect, and poor performance characteristic of failure-prone students can occur despite the presence of high-quality teaching, as seen in Figure 7.1 (see Perry, 1991, 2003, for reviews). Research on achievement motivation accounts for these developments in terms of maladaptive attributions for academic performance made by college students. Specifically, Weiner's attribution theory of achievement motivation (1985, 1995) suggests that the reasons that students use to explain academic outcomes can significantly influence subsequent learning-related emotions and cognitions, and in turn, achievement-striving behaviors (see *An Attributional Framework for Perceived Control in College Classrooms* section above). According to Weiner, causal attributions for poor performance to uncontrollable or stable causes, such as lack of ability or task difficulty, engender disengagement and a sense of hopelessness because these factors cannot be changed and are expected to continue to negatively affect one's performance. In contrast, failure attributions made to controllable or unstable factors, such as lack of effort or unfamiliarity, foster feelings of hope and persistence in students by generating perceptions of control over academic performance.

Over the past 30 years, research based on Weiner's attribution theory (1985, 1995) has consistently demonstrated the effectiveness of attributional interventions in helping individuals deal with failure. More specifically, ongoing research has concerned the development and evaluation of a psychotherapeutic cognitive treatment, referred to as Attributional Retraining (AR), which assists individuals by encouraging controllable and unstable attributions (e.g., effort, strategy) primarily for negative experiences. The benefits of AR techniques for improving performance are well known and have been illustrated in a variety of domains involving personal development and achievement. In terms of psychological and physical health outcomes, attributional retraining has been found

to be effective in the areas of group counseling (Green-Emrich and Altmaier, 1991; see Försterling, 1986, for review), health and aging (Weinberg, 2001), as well as the clinical treatment of psychosomatic disorders (i.e., Kaaya, Goldberg, and Gask, 1992; Morriss and Gask, 2002; see Garcia-Campayo, Sanz Carrillo, Larrubia, and Monton, 1997, for review). AR has also been found to correspond with better performance in achievement settings involving athletic competition (Miserandino, 1998; Sinnott and Biddle, 1998), persuasion (Anderson, 1983; Miller, Brickman, and Bolen, 1975), and job satisfaction (Curtis, 1992).

In an academic achievement context, research examining the effectiveness of attributional retraining techniques has provided considerable empirical support for the use of this remedial intervention to improve student development at all levels of the education system. In elementary school classrooms, AR has been found to be an effective means of reducing aggressive behavior (Hudley *et al.*, 1998), improving social skills (Aydin, 1988; see also Carlyon, 1997), and increasing learning strategy use (Borkowski, Weyhing, and Carr, 1988; Borkowski, Weyhing and Turner, 1986; Ho and McMurtrie, 1991). AR techniques have also been shown to improve problem solving, motivation, self-esteem, and academic achievement in elementary school students (Andrews and Debus, 1978; Craske, 1985, 1988; Dweck, 1975; Heller, 2003; Heller and Ziegler, 1996; Miller *et al.*, 1975; Okolo, 1992; Schunk, 1983; Ziegler and Heller, 2000; see also Heller, 1999). Research exploring the benefits of attributional retraining for high school students is encouraging, with AR treatments resulting in greater perceptions of control in depressed adolescents (Dieser and Ruddell, 2002), as well as improved self-esteem and academic performance (den Boer, Meertens, Kok, and Van Knippenberg, 1989).

In addition to AR studies with younger students, attributional retraining researchers have focused extensively on college students and their scholastic development, particularly the transition from high school to college. The bulk of research on AR in higher education has been directed toward improving students' academic development in terms of motivation and performance, as is the mandate of course instructors and academic administrators alike. Research aimed at facilitating overall career development has also found AR techniques to be effective in increasing students' perceptions of control concerning career-related decision making (Luzzo, Funk, and Strang, 1996) as well as career exploration (Luzzo, James, and Luna, 1996). Because enriched learning interventions are periodically ineffective for low-control college students



(Perry, 1991), motivational researchers have focused on AR treatments which can compliment traditional classroom teaching practices by enhancing students' perceptions of control over their academic achievement, and in turn, their academic career.

Previous reviews of research on attributional retraining in college students have repeatedly underscored the effective nature of the AR treatment in improving academic motivation and performance in low-control college students (Försterling, 1985; Menec and Perry, 1995; Perry, Hechter, Menec, and Weinberg, 1993; Wilson, Damian, and Sheldon, 2002). The following section provides an overview of findings from previous research on AR and achievement in college students, highlighting the results of classic studies as well as recent research from our laboratory.

#### ATTRIBUTIONAL RETRAINING IN THE COLLEGE CLASSROOM

Given the substantial differences between college and high school settings with respect to appropriate study strategies, note-taking, time-management, autonomy, etc., the extent to which academic success is controllable may not be immediately evident to first-year college students. In order to circumvent feelings of guilt that, according to Weiner's theory, can result from internal and controllable attributions for having failed, these students may choose maladaptive reasons for failing to absolve themselves of academic responsibility (i.e., attributions to test difficulty, or the professor), rather than directly alleviating feelings of guilt by exercising control over their learning activities. Thus, first-year students, particularly those having a low-control or helpless orientation, are considered to be "at risk" of developing motivational deficits due to dysfunctional attribution patterns. However, as freshman college students' attributions for academic failure are more malleable during this transition phase (Perry *et al.*, 1993), these students are well suited to benefit from attributional retraining.

To provide a conceptual framework for the following review of research on attributional retraining and academic achievement in college students, a chronological overview of AR research from classic studies such as Wilson and Linville (1982) to recent research by our laboratory is provided in Table 7.1. This table presents the specific intervention format employed in each study in terms of the induction technique employed (e.g., videotape) and the subsequent "consolidation exercise" intended to help students understand the attributional information.

Observed improvements on various measures of academic performance (e.g., lecture-based exams, final course grades, GPA) as well as the specific student risk groups found to improve most following the AR treatment are outlined as well. For example, the study conducted by Perry and Penner (1990) is described in Table 7.1 as including an AR treatment consisting of a videotape presentation (AR induction) and aptitude/achievement tests (AR consolidation) and as improving lecture-based test scores (outcome) for students with an external locus of control (risk condition). This table provides a useful overview of the sections below which describe in greater detail the impact of AR treatments on academic motivation and performance in college students, and particularly those students predisposed to academic failure due to control-related factors.

#### *Early Attributional Retraining (AR) Research*

Försterling (1985) classified attributional retraining methods in terms of informational approaches, operant methods, vicarious learning methods such as persuasion, and indirect communication. In early research with children, repeated exposures to face-to-face AR techniques, such as verbal performance feedback, have typically been employed in order to ensure the induction of AR information (e.g., Dweck, 1975; Miller *et al.*, 1975; Schunk, 1983). For the most part, however, only informational methods, usually involving written information or staged videotaped interviews, have been employed in studies with college students. In contrast to research with younger samples, studies on AR in college students have largely used these more abstract induction methods in order to capitalize on students' level of education and because these techniques are more efficient and can be administered en masse in larger college classrooms. As such, an AR intervention provided to college students typically consists of a videotaped discussion between graduate students or with a professor discussing the benefits of controllable or unstable attributions for failure, followed by an activity allowing students to personally elaborate on the information, either in a concrete fashion (e.g., by completing a difficult aptitude test) or in a more abstract manner (e.g., small group discussion; see Table 7.1). Researchers utilizing such attributional retraining techniques have shown modest, yet consistent, improvements in academic motivation and the performance of college students (Perry *et al.*, 1993).

As presented in Table 7.1, an early study by Wilson and Linville

(1982) found male first-year students increased their GRE and GPA performance as a result of videotaped interviews in which senior students described how low grades, being *unstable* in nature, often improve significantly after the first semester. Wilson and Linville (1985) presented failure as unstable, as opposed to controllable, arguing that attributing failure to a lack of effort may give rise to feelings of guilt which would inhibit future achievement striving. Weiner (1988) supports this approach, noting that encouraging students to adopt unstable attributions for poor performance should result in increases in expectancies of future success similar to the promotion of controllable attributions.

Block and Lanning (1984) undertook a secondary analysis of Wilson and Linville's data and found evidence contradicting their claims in that the GPAs of students who withdrew from college were actually higher than those of remaining students. They also noted that the improvements resulting from the intervention could be explained by regression toward the mean, among other factors. However, Wilson and Linville (1985) replicated their initial findings after considering these arguments, effectively illustrating the benefits of AR for motivation and performance in students. These results were also replicated by Van Overwalle *et al.* (1989) and Van Overwalle and De Metsenaere (1990) who used a videotape intervention to present academic success as a product of *controllable* achievement striving behaviors. The videotape consisted of students presenting reasons for their failure such as lack of peer cooperation, lack of effort, or ineffective study strategy, and then describing attempts to prevent failure in the future. Exposure to the intervention resulted in higher GPA scores at the end of the academic year.

In a review of attributional retraining techniques administered to college students, Perry *et al.* (1993) identify two studies showing that the inclusion of a written handout in addition to a videotape intervention is effective as well. Jesse and Gregory (1986–87) gave students AR in both handout and videotape formats, presenting GPA as an unstable phenomenon which generally improves over time. Students exposed to the intervention maintained stable GPA scores throughout the academic year, whereas students who did not receive the intervention experienced a decline in their second term GPA scores. Noel, Forsyth, and Kelley (1987) also used the combination of both the videotape and written AR formats. After viewing the videotape depicting poor performance as unstable and receiving a handout summarizing the main points of the videotape, students showed marked improvements in exam scores and final course grades. Thus, attributional retraining interventions in which failure is presented as either controllable or unstable have shown positive

**Table 7.1:** Chronological Overview of Methods and Achievement Outcomes in AR Research in College Students

AR induction	AR consolidation	Outcome	Risk conditions
<i>Wilson and Linville (1982, 1985)</i> Written report and video	Aptitude test, anagram task, and reason analysis	GPA*, GRE*	Concern over performance; low course exam scores
<i>Jesse and Gregory (1986–87)</i> GPA video	Written information on attributions	Stable GPA in second term	N/A
<i>Noel et al. (1987)</i> Video	Written summary	Final grade*	N/A
<i>Van Overwalle et al. (1989); Van Overwalle and De Metsenaere (1990)</i> List performance attributions and video interviews	Written and verbal reports	Exam score*	Low course exam scores
<i>Perry and Penner (1990)</i> 8 minute video	Aptitude test and achievement test	Achievement test*	External locus of control
<i>Menec et al. (1994)</i> 1. 1 or 2 video sessions 2. 1 or 2 video sessions	Achievement test Achievement test	Achievement test* Achievement test*	Low aptitude test scores Low aptitude test scores, external locus of control
<i>Perry and Struthers (1994)</i> Written handout 8 minute video	<ul style="list-style-type: none"> <li>• None</li> <li>• None</li> <li>• Group discussion</li> </ul>	None None Final grade*	Low perceived success

Continued

AR induction	AR consolidation	Outcome	Risk conditions
<i>Hunter and Perry (1996)</i> 8 minute video	<ul style="list-style-type: none"> <li>• None</li> <li>• Aptitude test</li> <li>• Achievement test</li> <li>• Group discussion</li> </ul>	<p>None Final grade* None None</p>	Low high school grades
<i>Struthers and Perry (1996)</i> 8 minute video	Group discussion	Final grade*	Uncontrollable attributions
<i>Pelletier et al. (1999)</i> 8 minute video	Aptitude test	Final grade*	Performance-orientation
<i>Haynes et al. (2003)</i> Written handout	<ul style="list-style-type: none"> <li>• Written assignment</li> </ul>	Final grade*	High optimism, low perceived success; low optimism, high perceived success
<i>Newall et al. (2003)</i> Written handout	<ul style="list-style-type: none"> <li>• Written assignment</li> </ul>	Final grade*	Low academic control and low desire for control
<i>Hall et al. (2004)</i> 8 minute video	<ul style="list-style-type: none"> <li>• Aptitude test</li> <li>• Written assignment</li> </ul>	Final grade and GPA* Final grade and GPA*	N/A
<i>Hall et al. (in press)</i> 8 minute video	<ul style="list-style-type: none"> <li>• Aptitude test</li> <li>• Written assignment</li> </ul>	None Final grade*	Low course exam scores, high primary control, low secondary control
<i>Ruthig et al. (2004)</i> Written handout 8 minute video	<ul style="list-style-type: none"> <li>• None</li> <li>• None</li> <li>• Group discussion</li> </ul>	GPA* GPA* GPA*	High optimism
<i>Stupinsky et al. (2004)</i> 8 minute video	<ul style="list-style-type: none"> <li>• Aptitude test</li> </ul>	Exam score*	N/A

Note: \* = Increase.

results in college students with respect to both course-specific and cumulative measures of academic performance.

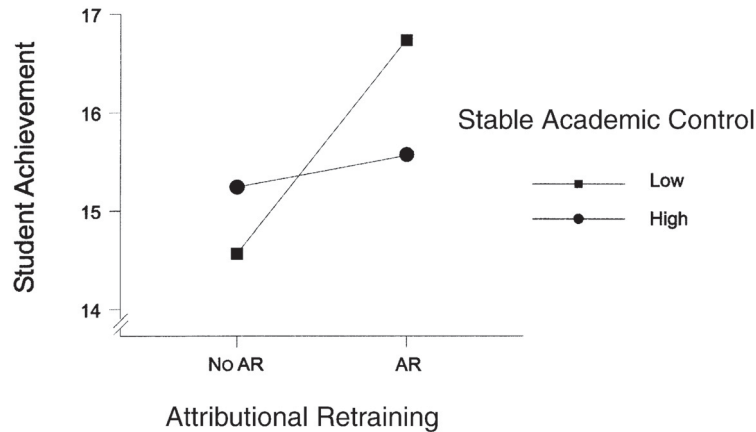
#### *Assisting Low-control College Students*

Despite the generally effective nature of attributional retraining (AR) in the college classroom, continuing research has been directed toward students who are most likely to benefit from an AR intervention, namely low-control students at risk of academic failure. As discussed in previous sections, individual differences in students' perceptions of control have important implications for performance in the classroom. Specifically, students lacking perceived academic control exhibit lower academic motivation, more negative emotions, diminished persistence, and poorer achievement (Perry *et al.*, 2001, in press; Schönwetter *et al.*, 1993). Our research also indicates that, although quality of instruction is largely beneficial for college student learning and performance (Perry, Leventhal, and Abrami, 1979; Perry and Smart, 1997; Perry and Williams, 1979), low-control students are least likely to benefit from effective classroom instruction (Magnusson and Perry, 1989; Perry and Dickens, 1984, 1987; Perry and Magnusson, 1987; Perry *et al.*, 1986). As such, ongoing research in our laboratory has focused on how students' perceptions of control interact with not only other individual differences and quality of instruction, but also instructional treatments involving AR techniques.

For instance, Perry and Penner (1990) administered AR using a videotape presentation in which a male psychology professor presented ability as unstable and encouraged students to attribute poor performance to effort (see Table 7.1). Contrary to Wilson and Linville (1985), Perry and Penner suggested that, in fact, external locus of control students do perceive effort as a salient explanation for performance following attributional retraining, thus allowing for increased confidence, motivation, and subsequent achievement striving (see Weiner, 1985). This premise was supported by findings showing significant improvements in students' performance on a homework assignment and achievement test following the intervention. This study is noteworthy because it was one of the first to demonstrate the effectiveness of attributional retraining primarily for low-control students, in this case as defined by an external locus of control.

This stable academic control  $\times$  attributional retraining (aptitude-treatment) interaction presented in Figure 7.2 has been replicated repeatedly in subsequent research by this laboratory on providing AR to low-control students. Consistent with Perry and Penner (1990), our research

**Figure 7.2:** Academic control  $\times$  attributional retraining interaction effect, adapted from Perry and Penner (1990). Stable control assessed: low academic control = external locus; high academic control = internal locus



has since demonstrated that, although high-control students perform well and generally do not benefit from the AR treatment, low-control students improve significantly following the intervention. However, in the absence of attributional retraining, low-control students perform more poorly than their high-control counterparts and risk more serious long-term academic failure experiences.

For instance, research conducted under similar laboratory conditions by Menec *et al.* (1994) showed significant improvements on a lecture-based achievement test following the first AR session in which the videotaped intervention depicted a student discussing how poor academic performance was the result of ineffective study strategies and a lack of effort. In keeping with Perry and Penner's (1990) focus on control-related risk factors, Menec *et al.* found that such improvements were evident only for students who had performed poorly on a pre-lecture GRE-type aptitude test, and further, for low-achieving individuals having an external locus of control. Thus, this study also found the positive impact of attributional retraining primarily to be observed for low-control students, assessed in this study using multiple academic risk factors related to academic control including poor test performance and an external locus of control. Although this study also addressed the potential for increased academic performance as a result of multiple AR sessions, the results showed no further increase in performance when two additional AR sessions were administered after the first session. As such, these results served to further highlight the effectiveness of brief

AR interventions in college student populations — a finding replicated repeatedly in research conducted since the classic work of Wilson and Linville (1982). See Wilson *et al.* (2002) for an elaborated discussion concerning the efficacy of brief attributional treatments for college student populations.

Following from Menec *et al.* (1994), a longitudinal field study by Struthers and Perry (1996) also utilizing a more complex classification of low-control students, showed that an AR treatment involving a group discussion resulted in higher grades in a psychology course for college students who initially used uncontrollable and unstable attributions for academic failure. However, despite increases in motivation and hope after AR for students with a stable/uncontrollable attributional style, similar improvements in performance were not found for these students. Pelletier, Hladkyj, Moszynski, and Perry (1999) also examined other groups of students that could benefit from attributional retraining, in this case, involving the completion of an aptitude test to allow students to more deeply reflect on the attributional content of the videotape presentation (see AR Consolidation Techniques below). Students were classified as at-risk based on previous goal orientation research showing that performance-oriented college students, who study course material primarily to achieve success and make ability attributions (see Atkinson and Feather, 1966; Covington, 1993) are likely to feel helpless and perform poorly after academic failure experiences. For students enrolled in a one-year psychology course, the AR intervention produced significant improvements in final course grades only for low-control students.

#### *Matching AR Treatments to Low-control Students*

Ongoing research in attributional retraining has also involved the manipulation of AR procedures in order to determine which techniques are best suited for specific groups of low-control college students. For instance, Perry and Struthers (1994) contrasted several AR procedures in a longitudinal field study in order to find the most effective intervention technique for students reporting low levels of perceived success in college at the beginning of the academic year (see Table 7.1). As discussed earlier, perceived success is an important precursor for perceived academic control in college students (Schönwetter *et al.*, 1993) and represents an intriguing avenue for investigating aptitude-treatment interactions in AR research. Attributional retraining was administered in three formats: written handout only, videotape only, and videotape and



small group discussion. The videotape depicted two graduate students discussing how adopting controllable explanations for poor performance following a difficult exam contributed to increased motivation and performance on subsequent tests. Results indicated that only students low in perceived success did better on in-class psychology tests and psychology final grades at the end of the year, and only in the videotape plus discussion condition.

Other student risk factors related to academic control described in earlier sections of this chapter have also been assessed in combination with AR intervention techniques. Hunter and Perry (1996) contrasted various AR techniques in attempting to find an effective intervention format for students having poor high school grades. Compared were four attributional retraining procedures: videotape only, videotape and aptitude test, videotape and achievement test, and videotape and small group discussion. The results showed marked improvements in psychology final grades only for students with poor high school grades following the videotape and aptitude test condition (see Table 7.1). Similarly, based on earlier research showing infrequent use of elaborate learning strategies to predispose college students to academic failure (Hladkyj, Hunter, Maw, and Perry, 1998), Hall *et al.* (2004) compared two AR procedures in an effort to establish an intervention technique most appropriate for these low-elaborating students. Specifically, we compared the effectiveness of the videotape and aptitude test condition used in Hunter and Perry (1996) with a videotape and AR-related writing assignment condition. Findings indicated that, for students who infrequently used elaborate learning strategies, both AR techniques were effective in improving psychology final grades. Surprisingly, both AR techniques also proved effective in increasing final course grades for high-elaborating students who were not at risk of academic failure (see Underlying AR Processes section below).

More recent studies have also involved the administration of AR procedures to students who are demotivated and failing because of overly-confident control beliefs. In a longitudinal field study, Ruthig *et al.* (2004) explored the effectiveness of the three AR techniques developed by Perry and Struthers (1994) for freshman college students who were potentially failure prone due to overly optimistic beliefs about success. Ruthig *et al.* found that all AR methods resulted in higher cumulative GPAs, lower test anxiety, and decreased course attrition for overly optimistic students. Hall, Chipperfield, Perry, Pekrun, and Schönwetter (2001) compared two AR treatment methods, involving either an aptitude test or a writing assignment, for unsuccessful students

who had a maladaptive combination of primary- and secondary-control beliefs. These students were unusual in that they had failed, but had high primary-control beliefs (e.g., effort, persistence) coupled with low secondary-control beliefs (e.g., reinterpretation of failure in a positive way). They found that only after the writing AR treatment were significant improvements in end-of-year course performance observed. These findings were replicated in a large-scale study by Hall *et al.* (in press) which showed an increase of approximately 10% or one full letter grade (i.e., D to C) in these students' course performance over the academic year following the writing-based AR intervention.

In sum, a major research focus in the literature has involved efforts to find appropriate attributional retraining methods for specific groups of students deemed to be prone to academic failure because of control-related factors (cf., Perry *et al.*, 1993; Menec *et al.*, 1994), as students' academic performance can be influenced by both the method of attributional retraining and student characteristics. Our research has found that AR can be particularly effective for certain students, namely those who are academically at risk of failure due to both dispositional and situational factors such as poor performance (Hunter and Perry, 1996; Menec *et al.*, 1994), maladaptive perceptions of control (Hall *et al.*, in press; Perry and Penner, 1990), low perceptions of success (Perry and Struthers, 1994), having performance goals as opposed to learning goals (Pelletier *et al.*, 1999), and overly optimistic beliefs (Ruthig *et al.*, 2004). In addition, this research demonstrates how the overall effectiveness of AR techniques may be improved by the explicit manipulation of treatment methods in order to find the most effective approach for specific types of low-control students (e.g., Hall *et al.*, 2001; Hall *et al.*, 2004; Hunter and Perry, 1996; Perry and Struthers, 1994; Ruthig *et al.*, 2004). However, it is through examining the specific components of the attributional retraining treatment that the processes presumed to underlie the effectiveness of this intervention may be more fully explored.

#### *AR Consolidation Techniques*

In attributional retraining research involving college students, the procedure typically consists of a videotaped "treatment" followed by a consolidation exercise intended to facilitate the cognitive integration of the attributional principles presented in the videotape. When contrasting the findings of research conducted by Perry and Struthers (1994) and Hunter and Perry (1996) with Jesse and Gregory (1986–87), Menec

*et al.* (1994), Van Overwalle and De Metsenaere (1990), Van Overwalle *et al.* (1989), and Wilson and Linville (1982, 1985), inconsistent results concerning the effectiveness of the videotape-only attributional retraining condition are evident. The former studies indicate that videotape-only attributional retraining does not lead to significant improvements in academic performance. However, neither Perry and Struthers nor Hunter and Perry required students to engage in any further activities following the attributional retraining videotape, whereas studies showing the videotape-only technique to be effective do indicate that some form of consolidation exercise was included (see Table 7.1).

For instance, both Perry and Penner (1990) and Menec *et al.* (1994) note that following the videotape presentation, the completion of either an achievement or GRE-type exam was included to allow students to put the attributional information presented in the videotape into practice (see Table 7.1). Wilson and Linville (1982, 1985) also indicate that immediately following attributional retraining, students were required to complete both an anagram task and GRE-type exam. In addition, these authors required half of the students to record as many reasons as possible for why grades improve following the first year of college. Similarly, the studies conducted by Van Overwalle *et al.* (1989) and Van Overwalle and De Metsenaere (1990) had participants describe in writing what they perceived to be the important aspects of the attributional retraining session and to discuss their comments with others in their experimental group. Such written accounts are similar in nature to the small group discussions employed in both Perry and Struthers (1994) and Hunter and Perry (1996) in that both activities require students to reflect on the attributional process in a meaningful way.

These studies clearly demonstrate that attributional retraining interventions require some sort of consolidation activity to be effective in which students are given an opportunity to either reflect about or act upon the information presented. Perry and Struthers (1994) suggest that such activities augment the influence of the intervention by encouraging students to actively reflect on and consolidate the attributional information with their existing achievement-related perceptions. In an earlier study in which attributions for academic performance were manipulated, Perry and Magnusson (1989) also noted that a lack of significant findings was most likely the result of not allowing students an opportunity for cognitive restructuring following the intervention.

Research on cooperative learning and academic achievement (i.e., group discussion; see Slavin, 1996, for review) suggests that cognitive elaboration processes may, in fact, be responsible for the effectiveness of

such post-videotape exercises. Further to this point, Hall *et al.* (2004) suggest that consolidation activities facilitate the impact of attributional retraining by encouraging greater elaborative processing of the information presented. Similar to explanations such as cognitive restructuring or consolidation (Perry and Magnusson, 1989; Perry and Struthers, 1994), *elaborative learning* involves the construction of meaningful cognitive interconnections between new and previously learned information, and is revealed in attempts to explain personal experience according to a new conceptual framework (Entwistle, 2000; Pintrich, Smith, and McKeachie, 1989). As such, our most recent research suggests that consolidation activities facilitate a greater understanding of the attributional process through elaborative mechanisms which allow students to relate their own life experiences to attribution theory, either through abstract thinking or more practical means.

#### IMPLICATIONS AND FUTURE DIRECTIONS

The significance of perceived control in human discourse is recognized by social scientists and laypersons alike when discussing personal relationships, job success, academic performance, or physical and psychological health. Simply put, people who believe that they have greater control over life's challenges seem to enjoy more of life's benefits, a reality reinforced by several decades of research evidence. In our attempts to understand the complexities of perceived control and the scholastic development of college students, our paradigm of choice has been social cognition, notably Weiner's (1985, 1995) attribution theory which provides a powerful explanatory framework for understanding perceived control in achievement settings.

From our research, it is clear that perceived academic control can have both short-term and long-term consequences for college students' scholastic development based on evidence from both laboratory and field studies. In seeking to optimize internal validity, laboratory studies afford strong experimental control in which subjects are randomly assigned to experimental conditions and independent variables are systematically manipulated. In our laboratory studies, perceived academic control was experimentally manipulated using attribution theory principles, either through failure/success feedback (Menec *et al.*, 1994), attributional inductions (Perry and Magnusson, 1989), or attributional retraining (Perry and Penner, 1990), or it was measured as a dependent variable

(Perry *et al.*, 1984). In our field studies, perceived control was manipulated with attributional retraining and was measured using questionnaires (Perry *et al.*, 2001; Ruthig *et al.*, 2004). In seeking to maximize external validity, the field studies complement the laboratory studies by observing the effects of perceived academic control in actual classroom conditions. AR has consistently been found in these field trials to increase perceptions of control in low-control students and to improve their scholastic performance.

Our research shows that, in times of academic uncertainty, such as the transition from high school into college, higher perceptions of control are beneficial to first-year students' scholastic development. Students who have a higher sense of academic control are better equipped to conquer the challenges of the first year of college likely because they believe the onus is on them to invest more effort to adjust their study strategies, and to seek their instructor's assistance as required. These high-control students generally experience more positive emotions and fewer negative emotions, such as shame, anxiety, and boredom than their low-control counterparts (Perry *et al.*, 2001; Schönwetter *et al.*, 1993). Students with higher academic control also tend to be more motivated to learn, putting more effort into academic tasks and persisting in their college courses to a greater extent than students with less academic control (Ruthig *et al.*, 2002) and to engage in more active learning, self-monitoring, and cognitive elaboration (Cassidy and Eachus, 2000; Perry *et al.*, 2001).

These positive academic-related emotional, cognitive, and motivational outcomes experienced by high-control students put them at a distinct advantage over their low-control counterparts in terms of achievement performance, ranging from higher introductory psychology course grades (Perry *et al.*, 2001), to cumulative GPAs (Hall, Perry, Ruthig, Hladkyj, and Chipperfield, 2005; Ruthig *et al.*, 2001), to persistence in first-year courses (Ruthig *et al.*, 2005; Perry *et al.*, in press). In contrast, students with a lower sense of academic control often feel completely overwhelmed when faced with the daunting challenges of first-year college, unable to make the connection between their own efforts and strategies and subsequent academic outcomes. Thus, having a sense of academic control is instrumental to surpassing the challenges of first-year college and can mean the difference between a mastery and helpless orientation in their scholastic development (e.g., Skinner, 1996; Thompson *et al.*, 1993).

#### EARLY IDENTIFICATION OF ACADEMIC CONTROL DIFFERENCES

An early identification of students' level of academic control is advantageous in assisting them to make the transition from high school into college because normally effective instruction often can be ineffective for low-control students (Magnusson and Perry, 1989; Perry and Dickens, 1984). The discussion method of instruction, for example, may be quite suitable for high-control students because of its open-ended structure, but less suitable for low-control students for the same reason. Alternately, the lecture method may appeal to low-control students because of its highly structured and predictable nature, but not to high-control students because of the lack of autonomy. Therefore, instructors may want to tailor their teaching methods early in the academic year to better accommodate students with differing levels of control.

Aside from the opportunity to adjust teaching methods to meet the learning-related needs of low-control students, early identification of students' level of academic control would enable instructors to provide intervention techniques to bolster students' sense of control. Research has repeatedly shown that providing low-control students with attributional retraining early in the academic year results in better performance on homework assignments, achievement tests (Menec *et al.*, 1994; Perry and Penner 1990), and final course grades by the end of that academic year (Pelletier *et al.*, 1999; Struthers and Perry, 1996). Consequently, modifying classroom instruction methods to incorporate AR techniques can serve to enhance the adjustment of low-control students to their first year of college. Thus, assessing students' level of academic control early in the school year, perhaps after receiving feedback on their first test or assignment, would allow for the opportunity to identify the particular needs of each student and maximize their likelihood of success during this critical transition period.

#### ACADEMIC CONTROL AND OTHER STUDENT DIFFERENCES

Although clearly positive, the consequences of academic control are not always as straightforward as initially thought. Instead, academic control often interacts with other individual differences between students to affect both the short-term (e.g., course grades) and long-term (e.g., GPA three years later) achievement of college students. Failure preoccupation, for example, enhances the effects of academic control (Perry *et al.*, 2001, in press), so that students with high academic control who are preoccupied with failure outperform high-control students who are

less preoccupied with failure. In addition, various academic emotions appear to moderate the effects of academic control. Higher levels of positive emotions, such as course enjoyment, or lower levels of negative emotions, such as course boredom or anxiety, tend to maximize the effects of high academic control on students' final course grades, cumulative GPA, and course attrition (Ruthig *et al.*, 2005). Conversely, low levels of positive emotions and high levels of negative emotions tend to nullify the effects of high academic control on achievement and attrition outcomes.

Evidently, knowing more about students' emotional states is critical to fully appreciate the role of academic control in persistence and achievement in college. Thus, further research focusing on the interactive effects of academic control and other commonly-experienced academic emotions such as pride (e.g., in achievement), hope (e.g., to succeed academically), shame (e.g., for poor performance), and guilt (e.g., for lack of effort) is needed to provide greater insight into how emotions enhance or impede the effects of academic control on achievement. Based on our own research, greater levels of positive emotions like pride or hope and lower levels of negative emotions like shame or guilt would likely maximize the benefits of high academic control. Conversely, lower levels of pride or hope and greater levels of guilt or shame would likely diminish the positive consequences of academic control.

Aside from learning-related emotions and failure preoccupation, perceived success is another major student difference that can modify the effects of academic control on scholastic performance. When paired with high academic control, perceptions of success are associated with greater achievement, yet when paired with low academic control, these same perceptions of success are associated with worse levels of achievement than having low perceived success (Schönwetter *et al.*, 1993). These findings are attributed to the fact that low-control/high-success students believe that, although they are successful, they do not have control over their academic outcomes. Thus, perceptions of success appear to only be adaptive if that success is believed to be within one's control.

The same may also be true of future expectations of success. Research by Ruthig *et al.* (2004), for example, explored the effects of high optimism on first-year students' GPA, test anxiety, and attrition, and drew similar conclusions. That is, highly optimistic students were thought to be at-risk academically if they did not have control perceptions in keeping with their optimistic expectations (e.g., "I expect to achieve an A+ in this course and my achievement depends on my own



hard work”). Currently, we are testing this assumption in a study in which highly optimistic students were randomly assigned to either an AR or no-AR condition and their pre- and post-treatment perceptions of control were examined along with their year-end academic outcomes (Ruthig, Hladkyj, Hall, and Haynes, 2003; see Underlying AR Processes section below). These findings, in combination with the results of Ruthig *et al.* (2004), show that high-optimism students who received AR developed increased perceptions of control and consequently obtained better grades than their no-AR counterparts. These preliminary findings support the notion that optimistic expectations are only adaptive among first-year students if they believe that making those positive expectations a reality is within their own control.

Although these recent studies provide some support, additional research is needed to confirm that both perceived success and positive future expectations are adaptive only when accompanied by perceptions of academic control. Future academic control research needs to consider additional student differences such as failure preoccupation, emotions, and current and future success expectations, which have been shown to interact with control perceptions to differentially affect students' scholastic achievement and persistence.

#### ACADEMIC CONTROL AND STUDENT HEALTH

Because the physical and psychological health of college students can potentially have serious academic consequences, health factors must be taken into account when considering students' scholastic development. In this connection, some of our recent findings indicate that academic control measured at the beginning of the first year of college significantly predicts health outcomes, with higher levels of control corresponding to better self-reported physical health and psychological well-being five months later (Ruthig *et al.*, 2002). Other research shows that the advantages of having *both* primary and secondary academic control extend beyond academic achievement into student health. Among female college students, for example, those who were proficient in both primary- and secondary-control strategies reported the best physical health and psychological well-being compared to students in three other groups who were deficient in either primary- or secondary-control strategies, or both (Hall, Chipperfield, Clifton, Ruthig, and Perry, 2002). These results can be explained, in part, by the fact that high-primary/high-secondary control students appear to switch between primary- and secondary-control beliefs when necessary in response to success and failure experiences.



This explanation is supported in a follow-up study by Hall, Hladkyj, Chipperfield, and Perry *et al.* (2002) which revealed that, among high-primary/high-secondary control students, those who were also capable of switching from primary to secondary control in failure situations reported the lowest occurrence of headaches, appetite loss, weight gain, indigestion, muscle tension, and fatigue. Thus, being able to switch between primary and secondary control as needed bolsters students' physical and psychological health, in addition to their motivation and academic performance (Hall, Hladkyj, Ruthig, *et al.*, 2002). Finally, additional recent research suggests that gender and perceived stress may moderate the effects of perceived control on student health (Hall, Chipperfield, Perry, Ruthig, and Götz, 2005). Although primary control related to better self-reported health among male students, and secondary control related to better health mainly among female students, the health benefits of both control approaches were largely due to their positive effects on students' perceptions of stress.

Future research can contribute to our preliminary academic control and student health findings in several ways. For instance, the study by Hall, Chipperfield *et al.* (2005) emphasized the importance of assessing the impact of primary and secondary control on more objective measures of physical health, such as the number of classes missed due to illness and number of physician visits, as well as the frequency of observable health risk behaviors (e.g., smoking, drinking, unprotected sex, drug use, etc.). In addition to more subjective measures of perceived health, these objective health measures would provide a more comprehensive representation of student health outcomes. It would also be useful for future research to examine long-term effects of perceived control on student health, over the course of a year or longer, to determine whether the benefits of control extend beyond the five-month duration assessed in our preliminary research. Finally, these health-related findings are encouraging in that perceptions of academic control are largely malleable. They suggest that increasing students' primary and secondary academic control through attribution-based AR treatments can enhance their physical health and psychological well-being, along with their academic motivation and achievement, and in doing so, potentially forestall the progression of more serious future health problems for low-control students. These recommendations underline the need to gain greater insight into the impact of primary and secondary academic control in the physical and psychological well-being of college students, as highlighted in our preliminary findings.

#### ACADEMIC CONTROL AND ATTRIBUTIONAL RETRAINING

Based on the rapidly expanding literature on attributional retraining in a higher education context, several promising areas for future research are apparent. Consistent with these previous studies, ongoing research in our laboratory on AR in college students is directed toward three main issues: (a) identifying other low-control student groups, (b) specifying the cognitive and motivational processes underlying the effectiveness of AR, and (c) administering AR treatments on a larger scale. Findings discussed below highlight the need for future research in each of these areas to further our understanding of how these techniques work, for whom they are best suited, and how they can be improved to benefit specific groups of low-control students.

##### *Identification of Student Risk Factors*

Recent research has found that examining combinations of control-related risk factors will enable the identification of students most at risk of academic failure and in greater need of attributional retraining. Such research is not new to attributional retraining researchers as exemplified by Menec *et al.* (Study 2, 1994) who defined at-risk students as having not only an external locus of control, but also poor performance on a GRE-type exam. In Pelletier *et al.* (1999), students were deemed to be at risk not only according to their goal orientation, but also in terms of failure-avoidance. Hall, Perry, Ruthig, Hladkyj, and Chipperfield (2005) also outlined how maladaptive perceptions of control involving high primary control and low secondary control predispose initially unsuccessful students to more serious deficits in end-of-year academic performance.

In a similar vein, recent research by Newall, Haynes, Hladkyj, and Chipperfield (2003) assessed the utility of a writing-based AR treatment for students differing in their perceptions of academic control and their desire for control over academic outcomes. As discussed earlier in this chapter (see Desire for Control section), some students have congruent perceptions of academic control and desire for control (i.e., high or low in both), but other students may feel in control yet not value it (high control/little desire), or conversely, they may desire a sense of control that they do not possess (low control/high desire). Following an AR treatment, significant improvements in course performance were found only for students who were either high or low in *both* academic control and desire for control. Further, this study found that AR was not effective

for students who were “mismatched” on these factors, that is, those who did not value the control they felt they had, or those who wanted more academic control than they felt they had.

Recent research has also examined the manner in which perceptions of academic success and feelings of optimism interact with AR to improve academic achievement in college students. Haynes, Ruthig, Newall, and Perry (2003) found that, following the administration of a writing-based AR treatment similar to that used in Newall *et al.* (2003) and Hall *et al.* (in press), course grades increased only for students with mismatched levels of optimism and perceived success. Specifically, AR was effective for students who were not optimistic but perceived themselves as successful, or did not feel successful but were optimistic, whereas it was *not* beneficial for students already feeling both successful and optimistic (i.e., “non-risk” students) or feeling neither successful nor optimistic (i.e., helpless students). Taken together, these findings suggest that by exploring how specific combinations of control-related student characteristics interact with attributional retraining to influence performance, we can obtain greater insight into what types of student dispositions are most beneficial or risky for academic development, and how AR can be used to help those students most at risk of failing during their first year of college.

#### *Underlying AR Processes*

Although the process of attributional change presumed to occur in college students following AR treatments has been assessed in previous research (Hall *et al.*, in press; Luzzo, James, and Luna, 1996; Menec *et al.*, 1994; Noel *et al.*, 1987; Perry and Penner, 1990), studies are needed that examine why AR treatments are effective for low-control students. For example, a recent study by Stupnisky, Perry, Hall, and Haynes (2004) used structural equation modelling to assess the attributional, cognitive, and emotional consequences of attributional retraining in first-year college students as proposed in Weiner’s (1985) attributional model. This research showed that for first-year college students who received attributional retraining, administered using the videotape and aptitude test format employed in Pelletier *et al.* (1999), the predicted mediational path was observed from first- to second-semester performance through controllable attributions (effort), perceptions of responsibility, and feelings of hope. In contrast, this attributional sequence was not found for students who did not receive AR, for whom previous

performance was found to correspond instead to uncontrollable attributions (ability).

Underlying AR processes were also investigated by Perry, Hall, Newall, Haynes, and Stupnisky (2003) who explored how both low- and high-elaborating students could benefit from a writing-based AR treatment. To examine this issue more closely, the AR presentation was followed by either a writing exercise asking students to elaborate on the attributional information in an abstract manner (e.g., summarization, personal examples; see Entwistle, 2000) or on the emotional impact of an academic failure experience (Pennebaker, 1997). High-elaborating students showed the greatest improvement in course performance and motivation when administered the writing exercise including specific questions of an abstract nature, whereas low-elaborating students benefited most when encouraged to elaborate more generally on their failure-related emotions.

Similarly, findings from Ruthig *et al.* (2003) indicate that control- and stress-related processes may underlie the effectiveness of AR for overly optimistic students, as found in Ruthig *et al.* (2004). The AR treatment encouraged more attributions to controllable causes (effort) and fewer attributions to uncontrollable causes (luck, instructor, test difficulty) in these overly optimistic students, and also increased perceptions of control and reduced feelings of stress by the end of the academic year. Hall *et al.* (in press) also explored changes in academic control resulting from AR in the context of Rothbaum *et al.*'s (1982) dual-process model of control. For freshman students with low test scores who relied on primary control to the exclusion of secondary control, higher perceptions of secondary control (e.g., finding the "silver lining") were found, along with lower uncontrollable attributions, following a writing-based AR treatment. In sum, these studies highlight the importance of exploring how processes involving perceived control, attributions, elaboration, and stress enable AR to improve the academic motivation and performance of low-control college students.

#### *Large-scale AR Administration*

By making attributional retraining techniques more user-friendly and efficient to administer, the large-scale application of brief yet effective AR treatments in the college classroom is quickly becoming a reality. Our research shows that AR involving consolidation exercises which are independently completed and administered en masse (e.g., writing

assignment, aptitude test) are effective in improving academic performance in college students: reporting poor high school grades (Hunter and Perry, 1996); having a performance as opposed to mastery orientation (Pelletier *et al.*, 1999); relying on primary relative to secondary control in failure situations (Hall *et al.*, 2001; Hall *et al.*, in press), and other recently identified risk combinations (Haynes *et al.*, 2003; Newall *et al.*, 2003). Although previous AR research in laboratory settings has shown group discussion consolidation activities to be of benefit to certain groups of low-control students (Perry and Struthers, 1994; Struthers and Perry, 1996), large college classrooms make it difficult for instructors to adequately monitor the content and direction and group discussions, ensure equal and motivated student participation, and minimize factors such as noise level, unequal group sizes, and gender-heterogeneity within groups (Slavin, 1996).

In contrast, AR consolidation activities that are completed more independently allow students to elaborate on the AR message in an efficient, yet highly personal manner, while minimizing the negative effects of group dynamics. For example, psychological processes involving social comparison and self-presentation (Tesser and Campbell, 1983) may render discussion consolidation techniques ineffective for some students when administered in actual intact classrooms because of students' concerns about discussing personal failure experiences in the presence of their peers (Hladkyj *et al.*, 1998; Weiner, Graham, Taylor, and Meyer, 1984). The administration of individually-oriented consolidation treatments also avoids difficulties posed by attempting to externally regulate an unstructured classroom discussion, and requires much less direct instructor supervision. Furthermore, due to the development of web-based research technologies, AR treatments could also be administered entirely over the Internet. Online AR methods allow this intervention to be provided not only to traditional college students, but also to other student groups who are often overlooked, including rural, mature, physically disabled, and deaf students. In this connection, computer-based AR methods have been found to promote mathematics skill development in children with learning disabilities (Okolo, 1992).

Preliminary research on the use of Internet-based AR techniques to facilitate career decision making in college students is also encouraging (Tompkins-Bjorkman, 2002). For more information on AR and career uncertainty in college students, see Luzzo, Funk, and Strang (1996) and Luzzo, James, and Luna (1996). Moreover, our own preliminary research

shows that a web-based AR session requiring students to read attributional information and complete an online aptitude test results in significantly higher subsequent test scores and final course grades for first-year students (Hall, Perry, Ruthig, Haynes, and Stupnisky, 2005). As such, AR techniques involving independently-completed consolidation exercises hold considerable promise for use in actual as well as virtual classroom settings by allowing large numbers of students to reflect on the attributional process in a structured yet meaningful way, while at the same time reducing distractions and instructor supervision.

In terms of assisting students on an individual basis, attributional retraining techniques could be implemented by peer counselors and academic advisors who regularly come into contact with college students who are demotivated, performing poorly, and are tempted to withdraw from a course or their academic program. By providing academic counselors with an understanding of Weiner's attribution theory (1985, 1995) so that they could encourage students to make controllable and unstable attributions for poor performance, these counselors would assist students in adjusting to the college environment, particularly during their first year. However, considering that many students in need of academic support do not seek professional assistance, another important potential application of AR in the college classroom involves the training of course instructors. Menec and Perry (1995) provide details for training college instructors to incorporate AR techniques into everyday classroom activities to assist the academic development of students who would otherwise perform poorly (see also Schönwetter *et al.*, 2001).

In terms of enhancing the efficacy of existing AR administration methods for college students, previous research suggests that including additional training modules alongside the standard attributional retraining session may improve its effectiveness. For instance, the findings of Hall *et al.* (2004) highlight the potential applicability of elaboration training in the college classroom (see Stark, Mandl, Gruber, and Renkl, 2002, for review). The results of this study suggest that by encouraging elaborative learning through explicit instruction, low-elaborating students may benefit from AR in not only course-specific but also overall first-year performance.

As done in previous AR research with college students (Van Overwalle and De Metsenaere, 1990) and elementary school students (Borkowski *et al.*, 1986, 1988; Miranda, Villaescusa, and Vidal Abarca, 1997; see also Pearl, 1985, for a review), strategy training based on a domain-specific skill set can also be incorporated into the attributional retraining intervention. For example, following the motivational AR

treatment, students can be provided an opportunity to learn the skills and behaviors required to succeed in a given course (e.g., memorization techniques for a biology course) or in college more generally (e.g., essay writing, study techniques). Finally, for students already investing considerable effort or those with overly inflated perceptions of academic (primary) control (Hall *et al.*, in press), an AR treatment encouraging students to also consider secondary-control strategies, such as adopting more realistic expectations or finding the “silver lining” (see Weisz, Thurber, Sweeney, Proffitt, and LeGagnoux, 1997), may also be an effective tool in facilitating the impact of attributional retraining in the college classroom.

#### SUMMARY OF RESEARCH ON ACADEMIC CONTROL IN HIGHER EDUCATION

Overall, our research on academic control has shown that a high level of control over educational experiences benefits students in several ways, over and above the predictive validity of traditional scholastic indicators, such as student aptitude. From enhancing their emotions, cognitions, and achievement motivation (Perry *et al.*, 2001; Schönwetter *et al.*, 1993), to improving their course grades and GPA (Hall, Perry, Ruthig, Hladkyj, and Chipperfield, 2005; Hall *et al.*, in press), to increasing their persistence as reflected in fewer courses dropped (Ruthig *et al.*, 2001, 2002), academic control provides students with the resources to overcome various educational obstacles. These findings also highlight the sustainability of the benefits of academic control over time, as evidenced by longitudinal research showing positive effects of academic control lasting up to three years (Perry *et al.*, in press). In addition to these main effects of academic control on student development, we have found that students' academic control also interacts with other individual difference variables involving academic emotions (Ruthig *et al.*, 2005), perceived success (Schönwetter *et al.*, 1993), and self-regulation (Perry *et al.*, 2001, in press) to predict performance outcomes. Previous laboratory analog studies of college classrooms demonstrate how classroom factors involving instructor effectiveness mediate the influence of academic control on scholastic development (Magnusson and Perry, 1989; Perry and Dickens, 1984, 1987; Perry and Magnusson, 1987; Perry *et al.*, 1986). Finally, our recent research suggests that by utilizing a dual-process model of perceived control, consisting of both primary and secondary academic control, we can gain a better understanding of how students adjust to failure experiences encountered during their first



academic year (Hall, Hladkyj, Ruthig, *et al.*, 2002; Hall, Perry, Ruthig, Hladkyj, and Chipperfield, 2005).

A major focus in our research has been to design attributional retraining (AR) procedures to assist low-control students (cf., Perry *et al.*, 1993; Menec *et al.*, 1994). We have found that AR techniques can be particularly effective for students who are failure prone due to both dispositional and situational factors such as an external locus of control (Menec *et al.*, 1994; Perry and Penner, 1990), maladaptive primary-/secondary-control beliefs (Hall *et al.*, in press), overly optimistic beliefs (Ruthig *et al.*, 2004), low perceptions of success (Perry and Struthers, 1994), infrequent use of elaborative learning strategies (Hall *et al.*, in press), reliance on performance goals as opposed to learning goals (Pelletier *et al.*, 1999), as well as poor academic performance (Hunter and Perry, 1996; Menec *et al.*, 1994). This research also shows how the overall effectiveness of AR techniques may be improved by the explicit manipulation of treatment methods in order to identify which AR procedures work best for different types of low-control students (e.g., Hall *et al.*, 2001, 2004; Hunter and Perry, 1996; Perry and Struthers, 1994; Ruthig *et al.*, 2004). These studies highlight the importance of providing not only AR information to students, but also of giving them the opportunity to elaborate on this information in a meaningful way through consolidation exercises which can be adapted to optimize the scholastic development of low-control students.

In having demonstrated the importance of academic control as an individual difference in college students and of attributional retraining as a viable instructional method for enhancing academic control, our next priority is to identify the underlying processes contributing to these findings. Notably, this requires a strong conceptual framework to guide the analysis of the underlying processes and a balance of methodological approaches involving both laboratory and field trials. In combination with our existing findings, these new studies should enable academic control differences between college students to be more clearly delineated, both for research and classroom purposes. In so doing, they would enable the efficacy of attributional retraining techniques to be subject to further development and improvement. As a consequence, failure-prone students would be more quickly identified by classroom instructors, before the students drop courses or withdraw from college altogether, and would be able to benefit from attributional retraining techniques applied in the classroom or offered more widely in university student-support programs.



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## 8. CLUSTER ANALYSIS IN HIGHER EDUCATION RESEARCH

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### INTRODUCTION

It may be of interest to some quantitative researchers in higher education to determine if, for example, colleges/universities may be grouped, college-bound students may be grouped, college students may be grouped, and college faculty may be grouped. The general notion to be discussed in this chapter is: Given a number of analysis units (e.g., colleges, students, faculty), each of which is described by a set of characteristics/attributes/traits (i.e., response variables), determine a method of identifying groups of units such that units within groups are similar in some respect and unlike those from other groups. Similarity may be with respect to some characteristics such as perceptions, types, attitudes, personalities, descriptors, etc.

The analysis “method” mentioned above is often considered *cluster analysis*; the “groups” are thus called *clusters*. [In some writings, the term *classification* (see, e.g., Gordon, 1999) is used; we, however, save the use of this term to the context of predictive discriminant analysis (Huberty, 1994, p. 28).] Cluster analysis is an age-old method of determining homogeneous groups of units. [According to David and Edwards (2001, p. 215), cluster analysis was originated by Tryon (1939).] A set of clusters has sometimes been termed a “typology” or a “taxonomy”;

the use of multiple (and sometimes confusing?) terms may be due to the replete use of cluster analysis in a multitude of disciplines other than education (e.g., artificial intelligence, biology, business, chemistry, engineering, medicine, psychology, sociology, zoology) — see, for example, Mandara (2003, pp. 132–133) for a brief discussion of some cluster analysis terms.

There are at least three reasons for conducting a cluster analysis. One reason is simply “data exploration,” the goal being to answer the question: Are there any meaningful clusters of units based on measures on a set of response variables? A second reason is to generate and/or test hypotheses regarding cluster structure. A third reason to conduct a cluster analysis is to confirm previously reported cluster results. The purpose of this chapter, then, is to describe the steps that may be considered in conducting a cluster analysis, and to illustrate the steps with a real data set. Obtaining cluster analysis-related information will also be illustrated.

## STUDY DESIGN

### SAMPLING UNITS

This expression is considered equivalent to “units of analysis” or “analysis units” or, simply, “units” or “objects.” Three examples of units in higher education research were given in the opening paragraph of this chapter. Of course, units should be selected in such a way that the entire set of units is representative of some meaningful population of units. This may be “easier said than done.” Whatever, at the onset, the researcher should have some population in mind, and use a sampling procedure that generates as meaningful a sample as is reasonable, and one that is relevant to a cluster analysis. The sampling process will undoubtedly call for the use of judgment on the part of the researcher.

### RESPONSE VARIABLES

Selection of response variables should also, of course, be relevant to the researcher’s purpose of clustering the units. The choice of variables may very well be based on previous research. The researcher may also consult with other researchers for some suggestions of relevant variables. Relevance may pertain to descriptions of the sampling units that in some way “hang together.” This notion may be important if the researcher

wants to attempt to examine resultant cluster differences in terms of some meaningful response variable “constructs.” [This will be illustrated with our data set.] Another consideration in variable choice is how the variables are measured. Obtaining valid and reliable variable measures is a very important aspect of the research process. As is often the case, some variables initially selected may have to be dropped because of inadequate measures.

In some research situations, it is understood that initial selection of variables may have an effect on the selection of sampling units. It is highly recommended that the unit and variable selection processes used be thoroughly described by the researcher. The design of any study involves *judgment* that may — should? — be mentioned in the final write-up.

#### SAMPLE SIZE

In many multivariate data analysis contents, sample size recommendations have been proposed. Usually, a minimum ratio of sample size ( $N$ ) to the number of variables ( $p$ ), that is,  $N/p$ , is recommended. This is not the case with cluster analysis. Some statisticians have claimed that cluster analysis has little, if any, formal statistical basis. Kaufman and Rousseeuw (1990, p. 1) state that “cluster analysis is the *art* of finding groups in data” (*italics added*). Formal statistical testing is not directly involved in cluster analysis. Therefore, the sample size needed to conduct a cluster analysis is a *judgment call* on the part of the researcher. If, for example, it might be expected that a relatively “small” cluster is expected, and cluster validation is considered, then a “large”  $N/p$  ratio would be desirable.

A little side note: The final data set to be used in a cluster analysis should be viewed as a unit-by-variable ( $N \times p$ ) data matrix:

$$\begin{array}{cccc}
 & V_1 & V_2 & \cdots & V_p \\
 u_1 & \left[ & & & \right] \\
 u_2 & & & & \\
 \vdots & & & & \\
 u_N & & & & 
 \end{array}$$

#### DATA INSPECTION

The first step in any data analysis procedure is to *look at your data*. The first “look” is to examine your  $N \times p$  data matrix. Any missing data?

Any “weird” matrix entries? A complete, correct data matrix is a must! If there “many” blanks in a given row, then the unit might be deleted. Of course, consideration may be needed regarding sample representativeness when units are deleted. In the unlikely occurrence that there are “many” blanks in a given column, then that variable might be deleted. Here are two more judgment calls! If only one or a “few” matrix entries (i.e., variable scores) are missing, then some “data imputation” method may be used. Imputation methods will not be discussed herein (see, e.g., Gordon, 1999, pp. 26–28; Roth, 1994).

A matrix entry (i.e., a variable score) that is “out of line” with other entries in the same row or same column, may be due to an error in entering the score. Otherwise, the researcher has to decide if the extreme score should be retained for analysis purposes, or be imputed, or to delete the associated unit. It should be noted that even an extreme score may be an acceptable score for a given unit/variable. If so, such a score may be retained; cluster analysis results *may* “expose” such an outlying unit. Prior to a cluster analysis, however, outliers may be deleted by considering the distance each unit is from the “typical unit” in the total groups of units. A typical unit is herein defined as the one with the vector of  $p$  means (a *centroid* based on the total sample). The distance measure suggested is the (squared) Euclidean distance (see Gore, 2000, pp. 306–307). [These distances will be computed for our exemplary data set.] The squared distances are ordered; a judgment call is then made in deciding whether one or more units may be identified as outliers. It should be noted that an outlier may or may not be an *influential* unit. That is, an apparent outlier may not influence cluster results. On the other hand, a outlier may, in fact, be an influential unit.

Two other aspects of variable scores that are very important pertain to validity and reliability. If the measurements for some or all of the variables are obtained using “standardized” instruments, then these two prospects may be found in the instrument manual. If not, an argument for validity and reliability of the scores should be reported. For reliability information, at least, the researcher may report an internal consistency index value. For more guidance pertaining to the reporting of validity and reliability information, see Gloeckner, *et al.* (2001) or Linn and Gronlund (2000, chps. 4, 5).

Another “look at your data” involves the (Pearson?) correlations among the response variables. This look would involve a  $p \times p$  (symmetric) correlation matrix for the data set on hand (after deletion/imputation). One thing to look for is any “high” correlation. For example, if a



two-variable correlation is, say, 0.90, then one of the two variables might be deleted for subsequent analyses.

Finally, it would be helpful for the reader of a cluster analysis study — or any other quantitative study, for that matter — to see variable descriptives. The usual descriptives reported for a given variable are the mean and the standard deviation. We contend that a better distribution description is given by a “five-point-summary”: Max,  $Q_3$ ,  $Q_2$ ,  $Q_1$ , Min ( $Q_2$  denotes the second quartile). Reporting this information for a “large” set of variables may be quite space-consuming; at least, these descriptives should be made available to the reader.

## INITIAL DECISIONS

### VARIABLE SCORE METRIC

With a set of  $p$  response variables, it is often the case that there is not a metric common to the measurement of all of the variables. Therefore, a means of “equating” the contribution of the variables to the clustering is to standardize — commonly using a  $z$  transformation — each of the variables. Standardization of the response variables prior to the conduct of a cluster analysis is commonly recommended — see, e.g., Milligan and Cooper (1988) who discuss multiple standardization methods.

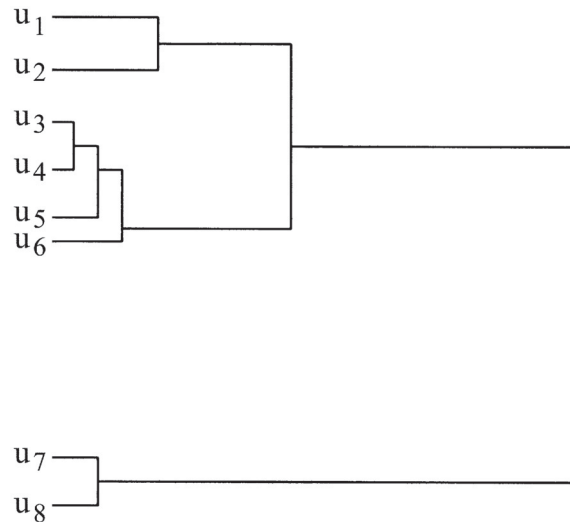
### SIMILARITY INDEX

Recall that the primary purpose of a cluster analysis is to determine analysis unit clusters so that the units within a given cluster are more similar to each other than they are to units in other clusters. “Similarity” (or, dissimilarity) is often based on a *distance* index. A popular distance index in, at least, the behavioral sciences is the (squared) Euclidean distance. This is the index favored by the current authors.

### CLUSTER METHOD

As indicated by a number of quantitative methodologists (e.g., Gordon, 1999; Gore, 2000; Milligan and Cooper, 1987), the researcher has a number of clustering algorithms from which to choose. To make our discussions fairly brief, we have chosen a combination of two methods. To start, we prefer the “hierarchical method” initiated by

**Figure 8.1:** Example of a Dendrogram



J.H. Ward about 40 years ago. The method starts with  $N$  single-unit clusters. Then, the  $p$  — number of response variables — squared (Euclidean) distances for all pairs of units are calculated. The two units whose squared distance is smallest form the first cluster. Again, the squared distances are calculated, and the two units — or, a unit and the first-formed two-unit cluster — with the smallest squared distance form the second cluster. This process is continued until a single cluster of all  $N$  units is formed. The results of the completed process may be represented in a graph called a *dendrogram* as in Figure 8.1 (taken from Gordon, 1999, p. 141).

As can be visualized from the dendrogram, one could consider from 1 to 8 clusters. So, the next decision to make is to decide on the number of clusters to retain for further analysis. It *might* be concluded from the simple dendrogram in Figure 8.1 that three clusters (units  $u_1$  and  $u_2$ , units  $u_3$ ,  $u_4$ ,  $u_5$ , and  $u_6$ , and units  $u_7$  and  $u_8$ ) should be retained. The Ward (1963) clustering method may not yield the “correct” solution because once a unit is in a given cluster, it cannot be assigned to another cluster. Using Figure 8.1,  $u_5$  may be closer to the  $p$  element centroid of the first cluster ( $u_1$  and  $u_2$ ) than to  $u_3$  and  $u_4$  combined, but  $u_5$  cannot be assigned to that cluster with the Ward method. [Four terms associated with the Ward Method are *hierarchical*, *minimum variance*, *agglomerative*, and *incremental sum of squares*.]

To overcome the unit reassignment issue, we suggest a follow-up

Table 8.1: Variables Selected from the CCSEQ

Variable	No. Items	Score Range
Class participation	1	1–4
Papers, readings	3	3–12
Work with other students	2	2–8
Analyses in class	3	3–12
Counselor interaction	7	0–7
Preparation for career	3	3–12
Writing and speaking skills	2	2–8
Self understanding	7	7–28
Nonacademic knowledge/skills	3	3–12
Instruction received	9	9–27
Library effort	7	7–28
Student-faculty effort	8	8–32
Interstudent effort	6	6–24
Art/music/theater effort	6	6–24
Writing effort	8	8–32
Science effort	9	9–36

cluster analysis which allows for reassignment of units from one cluster to another. Such a method is *nonhierarchical*. The method we suggest is the *iterative partitioning k*-means algorithm — where *k* denotes the number of clusters — which was developed in the mid 1960s, subsequent to the Ward method. [The Ward plus *k*-means combination is recommended by Milligan and Cooper (1987, p. 341).] To conduct a *k*-means analysis, the number of clusters needs to be specified at the start. This brings us back to a Ward solution. Rather than going through a fairly long discussion of the Ward and *k*-means combination, we will proceed with a discussion of an analysis of a real data set.

#### A REAL DATA SET

A cluster analysis will be illustrated with a sample of community college students. Over 700 students responded to 150 (or fewer) items on the Community College Student Experience Questionnaire (CCSEQ, Ethington, Guthrie, and Lehman, 2001). Items of interest to us turned out to be those that were scored with numerical values for two to four ordered categories. For the purpose of conducting a cluster analysis, 16 “variables” were defined — see Table 8.1.

The final sample of  $N = 592$  community college students was determined by those who had responded to all of the 16 item subsets. Validity

and reliability information for the last six effort scales was reported by Ethington and Polizzi (1996). Assuming that scores on all 16 scales are valid and reliable, we proceeded with an inspection of the  $592 \times 16$  data matrix. No missing data were detected. The 592 (squared) Euclidean distances from each student (represented by a vector of 16 variable scores) to the “typical student” (represented by variable means) were calculated (via SAS). The 592 distances range from 5.60 to 37.92 with no appreciable gaps; therefore, it was judged that no outliers were present.

[At this point in a reported cluster analysis study, a more detailed numerical description of all 16 variables would be reported. This description would include data imputation (if needed), results of an outlier inspection,  $16 \times 16$  Pearson correlation matrix, and numerical descriptives for the 16 variables. This information is available from the authors.]

For the current data set, a brief description of the 120 Pearson correlations is given below:

Max	.69
Q <sub>3</sub>	.38
Q <sub>2</sub>	.31
Q <sub>1</sub>	.24
Min	.08

## CLUSTER ANALYSIS

For the above-described data set, the research question may be: With respect to the 16 variables, are there definable groups (i.e., clusters) of community college students? Before addressing this question, a preliminary question must be addressed: How many clusters should be considered. To address this preliminary question, one can use two “criteria”: the cubic clustering criterion (CCC) and the fusion coefficient (pseudo F). To obtain numerical values of these two criteria, a Ward cluster analysis was conducted on the  $592 \times 16$  data matrix (using the Euclidean distance as a similarity index). [The SAS commands, with annotations, for our complete cluster analysis are given in the Appendix of this chapter.] An “elbow plot” for the CCC and for the pseudo F has the CCC or pseudo F values on the vertical axis and the number of clusters on the horizontal axis. The bend in the graph indicates the number(s) of clusters to consider. For our data set, we initially considered 5, 6, 7, and 8 cluster solutions; these cluster numbers were suggested by both the CCC plot and the pseudo F plot.

The 5-, 6-, 7-, and 8- cluster results — Ward followed by *k*-means analyses — were reviewed. It turns out that for the three latter results, there was at least one cluster of 40 or fewer students. For 16 response variables, this cluster size was judged to be too small. So it was decided to go with a 5-cluster typology. [Nine iterations were involved in the 5-cluster *k*-means analysis — what SAS labels FASTCLUS.] The cluster sizes are  $n_1 = 133$ ,  $n_2 = 134$ ,  $n_3 = 134$ ,  $n_4 = 129$ , and  $n_5 = 62$ .

A side note: Another approach to determining the number of clusters to consider is the use of *predictive* discriminant analysis (PDA). For the current data set, one would conduct PDA's for the 5-, 6-, 7-, and 8-cluster solutions. It is advised that for each of the four PDA's, a *linear* rule be used. The researcher would examine the resulting "classification matrix" — like Table 8.6 in this chapter — for each of the four PDA's (see Huberty, 1994, pp. 77–78). A difficulty in using such multiple PDA's is the estimation of prior probabilities of cluster membership. Before using this approach, it is strongly advised that the researcher consult a methodologist who has, to some extent, studied PDA.

To this point in the analysis, then, we have done the following:

1. Standardized the  $N$  raw scores,
2. Ran Ward plus *k*-means analyses using multiple numbers of clusters,
3. Decided on number of clusters, and
4. Constructed a new data set composed of multiple groups of students.

#### TYPOLGY DESCRIPTION

One numerical description of the decided-upon typology is given in Table 8.2. Here are the 16 *z*-score means (to the nearer tenth) for each cluster. One might try to make some "eye-ball" descriptions of the 5 clusters from the reported *z*-score means.

For example, it appears that Cluster 5 is comprised of community college students who had a very *positive* college experience. Cluster 2 students also appear to have had a positive experience, but not nearly as strong as Cluster 5 students. On the other hand, students in Cluster 3 expressed a somewhat negative attitude toward their experience. Students in Cluster 1 and Cluster 4 appeared to have had a negative experience, but not as extreme as those in Cluster 3. As the names of 16 variables indicate, some responses reflect an extent of student effort

**Table 8.2:** z-Score Means for the 5 Clusters

Variable	Cluster				
	1	2	3	4	5
Class participation	.33	.32	-.47	-.62	.92
Papers, readings	.26	.51	-.87	-.52	1.29
Work with other students	.09	.47	-.58	-.59	1.28
Analyses in class	.07	.57	-.68	-.56	1.25
Counselor interaction	-.08	.42	-.82	.11	.84
Preparation for career	-.04	.35	-.81	.11	.84
Writing and speaking skills	.29	.13	-1.03	.09	1.13
Self understanding	-.28	.59	-1.09	.19	1.29
Nonacademic knowledge/skills	-.40	.33	-.88	.41	1.20
Instruction received	.06	.19	-.89	.35	.66
Library effort	-.11	.50	-.76	-.09	.98
Student-faculty effort	.13	.52	-.76	-.52	1.34
Interstudent effort	-.23	.50	-.57	-.37	1.43
Art/music/theater effort	-.38	.40	-.44	-.06	1.04
Writing effort	.40	.43	-.89	-.41	1.00
Science effort	-.56	.86	-.40	-.27	.75
<i>n</i>	133.00	134.00	134.00	129.00	62.00

as well as extent of student benefit. With all this in mind, how might the five clusters be labeled? One possibility is the following:

Cluster	Label
1	So-so experience/effort
2	Positive experience/effort
3	Fairly negative experience/effort
4	So-so experience/effort
5	Very positive experience/effort

[Perhaps higher education researchers can come up with more meaningful labels.]

Another numerical description of the 5 clusters is given in Table 8.3. The variable raw-score means may paint a little different typology "picture." Here one can look horizontally, but not vertically; this would take 16 "looks." [A picture summary of these results is left to the reader.] A visual examination of the 5-cluster results may also be made via histograms of the 16 variable (*z*-score and/or raw-score) means for each of the 5 clusters. These are not provided herein because of space limitations.

**Table 8.3:** Raw-Score Means for the 5 Clusters

Variable	Cluster				
	1	2	3	4	5
Class participation	2.97	2.97	2.31	2.19	3.45
Papers, readings	7.99	8.48	5.77	6.47	10.02
Work with other students	5.01	5.59	4.01	4.02	6.79
Analyses in class	7.54	8.60	5.95	6.19	10.05
Counselor interaction	4.15	5.17	2.61	4.54	6.03
Writing and speaking skills	7.52	8.46	5.69	7.89	9.63
Self understanding	5.50	5.23	3.32	5.16	6.89
Nonacademic knowledge/skills	16.23	20.58	12.20	18.60	24.03
Instruction received	5.90	7.67	4.73	7.85	9.76
Counselor interaction	18.56	19.21	13.86	19.95	21.50
Library effort	13.92	16.82	10.86	14.01	19.06
Student-faculty effort	16.31	17.99	12.49	13.50	21.53
Interstudent effort	10.66	13.76	9.23	10.04	17.68
Art/music/theater effort	7.73	10.21	7.54	8.76	12.26
Writing effort	23.89	24.07	16.52	19.27	27.32
Science effort	11.83	21.10	12.88	13.73	20.34
n:	133	134	134	129	62

**Table 8.4:** z-Score Intercluster (Squared) Euclidean Distances

	Cluster			
	1	2	3	4
2	2.4			
3	3.3	4.8		
4	2.2	3.0	3.0	
5	4.6	2.7	7.4	5.3

There is some additional descriptive information that may be helpful in discussing cluster results. In reviewing the z-score means in Table 8.2, one may ask what two clusters are most similar, and what two clusters are most “distant.” One way to look at (dis) similarity is given in Table 8.4. Entries in this table are the 10 inter-group z-score distances. These are the (squared Euclidean) distances between pairs of the five z-score 16-mean vectors (i.e., centriods). For example, the (squared) distance from the centriod of Cluster 2 to the centriod of Cluster 4 is (to the nearer tenth) 3.0. The two clusters that are most similar (on the

“average”) are Cluster 1 and Cluster 4 — inter-cluster distance of 2.2. The two most dissimilar Clusters are 3 and 5 (7.4). These inter-cluster distances may be “tied-in” with the discussion of cluster description earlier in this subsection. And, one may also relate these inter-cluster distances to information obtained in a later section, CLUSTER DIFFERENCES.

#### CLUSTER VALIDATION

If reasonable, a higher education researcher could attempt to replicate a decided-upon cluster solution using a new sample (see Gordon, 1999, p. 185; Gore, 2000, p. 317). Or, if so inclined, one could use a resampling method (e.g., bootstrapping) to obtain repeated cluster results (see Webb, 1999, p. 309). Also, if the total sample size and the smallest cluster size are “large” enough, one might conduct multiple “half-sample” analyses (see Huberty *et al.*, 1997).

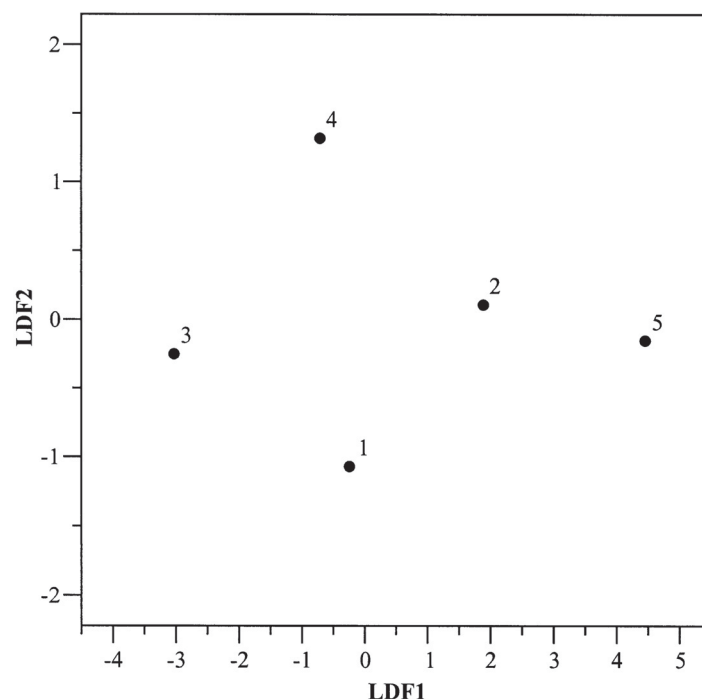
### POST-TYPOLOGY ANALYSES

#### CLUSTER DIFFERENCES

It is obvious from Table 8.4 that some clusters are fairly distant from others, while some pairs of clusters are relatively “close.” What we want to do now is to attempt to describe some cluster differences. To do this we will look at some information from a descriptive discriminant analysis (DDA) using raw scores. The specific information of interest is the set of linear discriminant functions (LDFs). An LDF is a linear composite of the 16 variables. For the current data set there are at most four LDFs to consider. The final number of LDFs to consider in the interpretation process may be determined in three ways (see Huberty, 1994, pp. 211–217). By considering the three pieces of information, obtained via SAS CANDISC, we concluded that two LDFs are adequate for our purposes. The two-dimensional “LDF plot” is presented in Figure 8.2. It appears from the plot that LDF<sub>1</sub> is associated with the distinction of Cluster 3 versus Clusters 4 and 1 versus Cluster 2 versus Cluster 5. And LDF<sub>2</sub> is associated with the distinction of Cluster 4 versus Clusters 1, 2, 3, and 5.

It may be of substantive interest to identify what constructs LDF<sub>1</sub> and LDF<sub>2</sub> represent. To “label” each LDF, “structure *r*’s” are examined. These are correlations of each of the 16 response variables versus an LDF.



**Figure 8.2:** Plot of Cluster Centroids in LDF Space

The structure  $r$ 's are reported in Table 8.5. The first LDF ( $LDF_1$ ) is, basically, a composite of three variables: Nonacademic Knowledge/Skills; Papers, Readings; and Student/Faculty Support. This construct may be described as "Nonacademic Attributes."  $LDF_2$  is, basically, defined by Instruction Received, Class Participation, and Nonacademic Knowledge/Skills. This construct may be described as "Student Benefits." [Higher education researchers may very well arrive at more appropriate labels for these two LDFs.]

Thus, it appears that differences in Nonacademic Attributes ( $LDF_1$ ) is what separates Cluster 3 (Fairly negative experience/effort), Clusters 1 and 4 (So-so experience/effort), Cluster 2 (Positive experience/effort), and Cluster 5 (Very positive experience/effort). Also, differences in Student Benefits ( $LDF_2$ ) separates Cluster 4 (So-so experience/effort) from the other four clusters.

Cluster differences may also be examined by considering some student variables other than those used in the cluster analysis. For example, numbers of males and females in the five clusters may be of some interest. Distribution of courses taken for the five clusters may

**Table 8.5:** Structure  $r$ 's for CCSEQ Data

Variable	LDF <sub>1</sub>	LDF <sub>2</sub>
Class participation	.22	-.43
Papers, readings	.40	-.36
Work with other students	.32	-.31
Analyses in class	.35	-.29
Counselor interaction	.26	.17
Preparation for career	.25	.15
Writing and speaking skills	.32	-.01
Self understanding	.46	.40
Nonacademic knowledge/skills	.33	.50
Instruction received	.22	.23
Library effort	.28	.07
Student-faculty effort	.38	-.30
Interstudent effort	.34	-.06
Art/music/theater effort	.22	.16
Writing effort	.33	-.33
Science effort	.26	.17

\*Note. "High" structure  $r$ 's are in **bold**.

also be of interest. There are many other item responses that could be considered in describing cluster differences.

#### CLASSIFICATION RULE FOR NEW SAMPLE

Suppose a higher education researcher was informed of the cluster typology developed for students who responded to the CCSEQ. Suppose, further, that the researcher was interested in "profiling" a group of "new" students. That is, the question of interest pertains to determining the cluster with which the new students would most likely be identified. To do this, the researcher needs to have access to a "prediction rule." [It is assumed that the CCSEQ items of interest were those that defined the 16 response variables considered in the current analysis.]

The way to determine a cluster membership prediction rule is to conduct a *predictive* discriminant analysis (PDA). It is suggested that a *linear* PDA be conducted. This analysis may be done using SAS DISCRIM, and was run using the current data set ( $N = 592$ ,  $p = 16$ ,  $k = 5$ ). The cluster membership prediction method used is "external" (or, leave-one-out; Huberty, 1994, pp. 88–90). [The prior probabilities used for the five clusters are, respectively, .225, .225, .225, .225 and .100.] The results of

**Table 8.6:** Cluster Membership Prediction

		Predicted Cluster					<i>n</i>
		1	2	3	4	5	
Actual Cluster	1	.95	.02	.02	.02	.00	133
	2	.05	.93	.00	.02	.00	134
	3	.04	.00	.93	.03	.00	134
	4	.02	.01	.05	.92	.00	129
	5	.00	.16	.00	.00	.84	62

the cluster membership prediction for the current data set are given in Table 8.6 — a “classification matrix.” As is perhaps obvious from the Table 8.6 results, the prediction accuracy of membership for all five clusters is quite good — only for Cluster 5, is the estimated cluster membership prediction accuracy less than .92.

Once the group membership prediction “hit rates” (on the main diagonal in Table 8.6) are determined, it may be of interest to have available a (linear) prediction rule. A “rule” in a PDA consists of *k* linear composites, one associated with each cluster. These composites are called *linear classification functions* (LCFS, *not* LDFs). For our data set, the first LCF is:

$$\begin{aligned}
 Y_1 = & -86.0 + 5.0V_1 + 2.8V_2 + 2.2V_3 + 1.0V_4 + .7V_5 + 1.4V_6 \\
 & + .8V_7 + .8V_8 + 1.2V_9 + 1.0V_{10} + .6V_{11} + .9V_{12} + .7V_{13} \\
 & + .9V_{14} + .7V_{15} + 0.4V_{16}.
 \end{aligned}$$

[The variable names are listed, in order, in Table 8.1.] Similarly, the other four LCFs may be obtained from the computer output. The five sets of LCF weights may be used for a new student to make a prediction as to with which cluster he/she may be identified. For a given new student, the five LCF scores would be calculated, and the student would be assigned to the cluster with the largest LCF score.

### CLUSTER ANALYSIS STEPS

The steps in conducting a cluster analysis will be briefly listed — see Huberty *et al.* (1997) and Milligan and Cooper (1987) for more detailed descriptions of the steps.

Inspect cluster analysis data matrix for missing data and outliers

#### Pre-analysis

1. Select analysis units (e.g., students)
2. Select set of response variables
3. Measurement of response variables
4. Variable score metric — standardize?
5. Select similarity index
6. Select cluster method — Ward plus *k*-means?
7. Determine initial cluster typology
8. Provide evidence of cluster validity
9. Interpret final cluster typology

#### Post-typology

10. Cluster differences
11. Classification rule for new sample

## REPORTING CLUSTER ANALYSIS RESULTS

#### Introduction

- Purpose of study
- How analysis units were sampled
- Support for representativeness of sample
- Sample size
- Rationale for initial choice of response variables
- How each variable is measured
- Information on validity and reliability of variable measures

#### Preliminaries

- Search for, and handling of, missing data
- Name of computer package/programs program
- Version of package/programs
- Five-point descriptives for all variables (if reasonable)
- Variable correlation matrix (if reasonable)

#### Pre-Cluster Analysis

- Variable score standardization (?)
- Similarity index used

### Cluster Analysis

- Algorithm(s) used
- Method used to determine number of clusters

### Post-Typology Analyses

- Cluster differences
- Cluster membership prediction

See, also, Gore (2000, p.317) and Milligan and Cooper (1987, pp. 350–351).

## ADDITIONAL NOTES

The higher education quantitative researchers who are more statistically inclined may refer to the following references on the associated cluster analysis topics:

Arabie <i>et al.</i> (1996)	Cluster methods
Breckenridge (2000)	Cluster validation
Gordon (1999)	Cluster methods
Kaufman and Rousseeuw (1990)	Cluster methods
Milligan (1996)	Cluster validation
Milligan and Cooper (1988)	Variable standardization
Schaffer and Green (1996)	Variable standardization
Steinley (2003)	Alternative cluster analyses

For readable discussions of cluster analysis in general see:

Aldenderfer and Blashfield (1984)

Huberty *et al.* (1997)  
Gore (2000)  
Milligan (1996)  
Speece (1995)

Four applications of cluster analysis in higher education research are:

Braxton *et al.* (1991)  
Ethington and Polizzi (1996)  
Harris and Kaine (1994)  
Smart (1982)

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## APPENDIX

### SAS annotated syntax for a cluster analysis

The syntax commands used to access the data file and standardize the data for the cluster analyses are included below.

```
data ccseq;
set data1;
id = _N_;
proc standard mean = 0 std = 1 out = stan;
var class1--qesci;
run;
```

#### I. WARD ANALYSIS SYNTAX

The **proc cluster** procedure with **method = ward** was used to conduct the Ward minimum distance analysis. The **pseudo** and **ccc** commands each specify the calculation and inclusion of the pseudo F statistics and cubic clustering criterion, respectively. The **outtree = wards** command put the results into a new SAS dataset.

1. `proc cluster data = ccseq method = ward pseudo ccc outtree = wards;`
2. `var class1--qesci;`
3. `copy id;`
4. `proc sort; by cluster;`
5. `proc print; by cluster;`
6. `proc means; by cluster;`
7. `run;`

\*Note: The following syntax will generate `ccc × cluster number` plots.

The *ncl* command (line 13) is used to specify the number of clusters — in this case, 5.

```
8. proc plot;
9. plot _ccc*_ncl_/vpos = 26
10. haxis = 1 to 30 by 1;
11. plot _psf*_ncl_ = 'F'/vpos = 26
12. overlay haxis = 1 to 30 by 1 vaxis = 0 to 200 by 50;
13. proc tree data = wards noprint ncl = 5 out = tree noprint;
14. copy id class1--qesci;
15. run;
```

\*Note: As part of the preliminary investigations of the study data, observations were sorted according to Euclidean distance to see if any ordering resulted from that criterion. Although these were not used as part of the substantive sets of analyses, the syntax for obtaining them, and sorting the observations accordingly, is included below.

```
16. data ccseq;
17. d = sqrt((class1 - 2.70)**2 + (clas235 - 7.48)**2 + (clas47 -
4.88)**2 + (clas8910 - 7.39)**2 + (counsum -
4.32)**2 + (gainsum1 - 7.62)**2 + (gainsum2 -
5.02)**2 + (gainsum3 - 17.64)**2 + (gainsum4 -
6.86)**2 + (learnsum - 18.25)**2 + (qelib -
14.44)**2 + (qefac - 15.76)**2 + (qestacq -
11.64)**2 + (qeamt - 8.95)**2 + (qewrite -
21.61)**2 + (qesci - 15.47)**2);
18. proc print data = ccseq;
19. proc sort data = ccseq out = sort; by d;
20. run;
```

## II. SYNTAX FOR CALCULATING AND SAVING CLUSTER CENTROIDS FOLLOWING WARD ANALYSIS

The command syntax below was included to calculate and save the cluster centroids following obtaining the Ward solution. These became the initial seeds for the *k*-means procedure.

```
21. proc means data = tree;
22. var class1--qesci;
23. by cluster;
24. output out = seed mean = ;
```



```
25. proc print data = seed;  
26. run;
```

### III. SYNTAX FOR CONDUCTING K-MEANS ANALYSIS

Notice that the maximum cluster size (maxc; line 27) equals 5.

```
27. proc fastclus data = ccseq seed = seed out = kmeans maxc = 5  
    distance converge = 0 maxiter = 100;  
28. var class1--qesci;  
29. proc sort; by cluster;  
30. proc freq data = kmeans;  
31. proc print data = kmeans; by cluster;  
32. run;
```

## 9. IDEAS OF A UNIVERSITY, FACULTY GOVERNANCE, AND GOVERNMENTALITY

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In a context of “crisis” confronting higher education, a line of thinking tells us, governance is in need of reform to enable efficient decision-making so that universities may respond effectively to changing “environments.”<sup>1</sup> Benjamin and Carroll (1998) write that “the challenge to higher education emanates from dramatic changes simultaneously occurring in its role in society, the demographic composition of the student body, societal demands for research and service, the costs of instruction and research, and the availability of public support” (p. 92). By their analysis, “A redesigned governance system is a prerequisite for responding effectively to the various problems facing higher education” (p. 93). There is little consensus about the form reform should take, but as “challenges” mount, researchers, administrators, and policymakers increasingly frame governance as a site in need of improvement.

This essay seeks less to respond to specific calls for change than to raise some questions — with the hope of encouraging future inquiry — about governance itself. Specifically, I explore faculty participation in governance (or shared governance) in the context of “crises,” “challenges,” and changing “environments.” I draw from Eckel’s (2000)

<sup>1</sup>A curious term that seems to separate universities from society, “environment” is frequently used in discussions of “crisis” and “change” related to higher education, and often appears to refer to market changes. For example, Longin (2002) describes “environment” as entailing such issues as “changing student demographics, resource constraints, changing public expectations of higher education, heightened competition within and beyond higher education, and changes in information technology” (p. 212; see also Duderstadt and Womack, 2003). And Gumpert (2002) speaks of “pressure to respond to heightened market competition, advanced communication technologies, and unprecedented public scrutiny” (p. 47) as representing an unprecedented moment of “imminent change. The concern is whether universities can continue to respond to a formidable mix of changing environmental demands” (p. 47).

definition of shared governance as “the system, composed of structures and processes, through which faculty, administrators, and other campus constituents make collective institutional decisions” (p. 16). These processes are not only formal and structural, but also include the everyday and the informal, the spoken and the tacit, or what Hirsch and Weber (2001) refer to as “the formal and informal exercise of authority under laws, policies and rules that articulate the rights and responsibilities of various actors, including rules by which they interact” (p. viii). While some of my discussion relates to formal structures and university-wide contexts such as senates, I also point to policies and informal interactions at the department and college levels as the changing “environment” affects each of these contexts, which in turn affect each other.

I choose shared governance as a site of inquiry not only because of recent assaults on its structure and functions (e.g., Association of Governing Boards, 1996) but also due to the fact that many writers name faculty governance as a location that faces new questions “related to resource constraints and competing values” (Kerr, 2002, p. 13). As I will detail, calls for increased managerialism in order to achieve efficient decision-making, or structural issues, and questions of resources and values, or substantive issues, arise as universities align themselves with corporate interests and practices — in essence, becoming part of the changing “environment.” Because the “environment” of accountability and fiscal crisis renders public institutions, particularly research universities, especially vulnerable to shifting funding priorities and practices, this chapter focuses on shared governance at public research universities.

In an epoch of corporatizing universities, governance is an important question, as institutions and individuals are called on not only to generate funding for their departments and colleges but also to involve themselves with decision-making about university-wide policies and practices related to distance learning, intellectual property and technology transfer, hiring and the roles of part-time and non-tenure track faculty, enrollment patterns, course and program viability, revised criteria for promotion and tenure, and so on (Kerr, 2002). Corporatization would answer these questions with responses based on economic utility, the satisfaction of “consumer” desires, and a need to make efficient, “responsive” decisions, which faculty might or might not do. How these issues are defined and deliberated raises questions about the purposes of universities and the nature and meanings of faculty work. Indeed, Marginson and Considine (2000) underscore the importance of governance in light of corporatization:

Governance is where the *identity* of each university as a distinctive social and cultural institution is shaped, within a “global knowledge economy.” Here the potential of governance is ambiguous. On one hand, it can be the medium for the one-way subordination of universities to other social agents or designs. On the other, it offers the one distinctive means whereby individual universities can remake themselves along innovative lines; and universities as a group can offer the wider community an example of self-invention. (pp. 8–9)

Questions of institutional identity that surface in governance also relate to the identities of faculty governors, which, I will argue, are in flux. I position this flux, in which faculty members’ identities generally and as they participate in governance particularly, are not fixed but multiple, in relation to two dynamics: (1) the shifting terrain of postsecondary institutional identities and practices under corporatization, as faculty members are called on to think differently about their work, and (2) faculty members’ dual positions in shared governance as both governors and governed. This flux can constrain thought and action at the same time that it can open possibilities for meaningful governance.

Like many who believe that faculty should participate in deliberating and defining universities’ missions, policies, and practices, I predicate this essay on a somewhat traditional view of the rights and responsibilities of faculty members to contribute to shaping campus decisions. However, the rapid reconfiguration of the university and faculty members’ roles as well as some four years of active participation on my institution’s University Senate (including, most notably, a grueling year-and-a-half of sub-committee negotiations over the terms of an intellectual property policy) have led me to wonder to what extent and under what conditions “shared governance” is the ideal path to the “common good” many claim it to be. Gerber (2001), for example, claims that “faculty are far more likely to be defenders of academic integrity than are administrators or governing boards that rely on a managerial philosophy that considers only a very narrowly conceived ‘bottom line’” (p. 24). Sharing similar assumptions, Birnbaum (1991) argues that senates can “serve as a constraint on an ambitious administration” (p. 18) that may seek to consolidate its authority in the face of fiscal constraints or calls for accountability. Yet the corporatization of public research universities’ purposes and processes, particularly when combined with an “environment” of “crisis,” naturalizes the need for academic commercialization, and correspondingly shifts understandings of the common good. Thus, as budget shifts and reward structures change to “incentivize” (a term I learned on a university committee seeking, ironically, to

encourage ethical research conduct) faculty to take on new roles and to think differently about their roles, I question claims that faculty inherently serve as a “check” on the market logic of administrators. I by no means seek to undermine the importance of faculty governance. Rather, I am interested in understanding how faculty participation in governance relates to larger shifts in the university and shifting forms of academic subjectivity.

I begin with an overarching theme of this essay, corporatization, as a way of setting a context for subsequent discussion of faculty work, changing ideas of community, and governance itself. I argue that rapid changes in ideas about and practices in the university brought on by corporatization create conditions that affect faculty members’ understandings of their work and identities — and, thus, their responses to their surroundings in contexts such as governance. My discussion of the corporatization of public universities as it relates to reconfigured meanings of faculty work and to a “crisis” of governance lays a groundwork for asking how faculty members’ subjectivities as academics relate to their participation in university governance. I then connect these ideological and practical changes to changing ideas of what it means to work in public research universities, focusing on faculty subjectivity as it relates to ideas of a “community of scholars,” “collegiality,” and the “common good” that underlie principles of shared governance. Finally, I turn to Foucault’s idea of “governmentality” as a way of thinking about how faculty govern themselves in ways not accounted for in discussions of governance.

Johnson, Kavanagh, and Mattson (2003b) have commented, “What is new about today’s university is not only that it serves the corporation — for it has always done that — but that it *emulates* it” (p. 13). As service to corporate interests has led to a logic of imitating corporate practices, those concerned with the internal governance of universities must inquire into the subject positions available to and taken up by faculty members as they participate in governance as both governors and governed. These questions of positioning are at the center of this inquiry.

## MARKETIZING UNIVERSITIES

Nearly a century ago, Thorstein Veblen (1918/2003) wrote a stinging indictment of universities’ increasing alignment with business interests, which he flatly rejected as technical, utilitarian, and anti-intellectual as

they crowded out academic practices of “idle curiosity” (p. 4), or the pursuit of knowledge with no immediately foreseeable uses. He based his diagnosis of the state of higher learning on “the consequences which an *habitual* pursuit of business in modern times has had for the ideals, aims and methods of the scholars and schools devoted to the higher learning” (p. 3; italics mine). Interesting in his formulation is his emphasis on habits, which today we might interpret as ideology, *zeitgeist*, or the naturalization of linking the content, methods, and values of business to ideas of universities’ purposes. Veblen wrote of institutions as at once changing with history and institutionalizing these changes: “An institution is, after all, a prevalent habit of thought, and as such it is subject to the conditions and limitations that surround any change in the habitual frame of mind prevalent in the community” (p. 25). Habits of thought that valorize the practical, he argued, seep into multiple facets of university life and work to “govern the detail lines of academic policy, the range of instruction offered, and the character of the personnel” (p. 45). In a statement that was both descriptive of his time and prescient of this moment, Veblen argued that the “surveillance of academic work . . . through the board’s control of the budget” (p. 58) would perpetuate competition among and within universities for resources and students as practical interests dictated curriculum and the hiring of faculty. Where these practical interests encouraged a distinctly vocational cast in many institutions in the first decades of the twentieth century, business in the late twentieth century increasingly called on universities to align themselves with the production of wealth. Indeed, Patricia Gumpert (2001) attributes public universities’ corporatization to an intersection of higher education’s history of practical service with contemporary discourses of accountability and consumerism such that universities have adopted a corporate model:

to produce and sell goods and services, train some of the workforce, advance economic development, and perform research. Harsh economic challenges and competitive market pressures warrant better management, which includes swift programmatic adjustment, maximum flexibility, and improved efficiency in the direction of greater accountability and, thus, customer satisfaction. (p. 87)

Efficiency, flexibility, and accountability respond to needs to generate revenue.

Over the past several decades in the United States, market ideologies associated with neoliberalism that embrace privatization, commercialism, and consumerism have become something of a habit of thought in

numerous spheres, including universities. With its emphasis on individuality, rationality, self-interest, and the substitution of the market for the state, neoliberalism has become a dominant logic in higher education policy and practice (Peters, 2002, p. 144). As a set of policies that embraces the market and privatization, neoliberalism's emphasis on wealth creation rather than the public good (or its claim that wealth creation is a public good) unites those traditionally considered "liberal" or "conservative." With the erosion of distinctions between liberal and conservative economic policies, the market's influence on public universities means that "higher education has evolved from being regarded as a public good, supported primarily by tax dollars, to being viewed increasingly as a private benefit" (Duderstadt and Womack, 2003, p. ix). Broadly speaking, as public institutions have been vilified and the private sphere and the efficiency of market competition glorified, citizenship has been redefined as individual consumer choice and the work of universities linked to the instrumentalism of the market. As Lyotard (1984) argued two decades ago, "Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production: in both cases the goal is exchange" (p. 4). A privatized, market logic of exchange gives rise to the student as customer, knowledge as property, faculty as entrepreneurs, and departments and colleges as "cost centers."

It is crucial to underscore that changes in universities constitute part of a larger shift spurred by "free market" neoliberal economic policies and the cultural values of a consumer society (Smart, 2002). As Derek Bok (2003) acknowledges, the spread of commercialization, entrepreneurialism, and aggressive marketing techniques to endeavors typically not considered to lie in business domains has "legitimate[d] the use of similar methods in universities" (p. 5). Thus, universities are but one sphere that is affected by neoliberalism's "pursuit of increasing efficiency, calculability, predictability, and control" (Smart, 2002, p. 49). As corporate language and practices, such as "restructuring, increased productivity at less cost, total quality management, greater consumer satisfaction, outsourcing, reduced administrative fat, technological investments, a focus on core functions" (Lazerson, 1997), enter university practice, the academy positions itself as subject and object of the market. Yet, given their missions of creating knowledge and fostering learning, universities are uniquely affected.

A number of writers have pointed to the ways a market logic in higher education has become naturalized in the "language we use in both representing and evaluating human behavior and action" (Giroux,

2002, p. 426). Giroux (2002) claims that the preponderance of a language of commercialism, privatization, deregulation, individualism, competition, and consumption has displaced civic and democratic discourse across the domains of teaching, research, service, and administration. As Gumpert (2001) argues, this economic logic submerges ideas of universities' social functions, such as "the cultivation of citizenship, the preservation of cultural heritage(s), and the formation of individual character and critical habits of mind" (p. 87). Giroux implicates institutional actors, including students, staff, faculty, and administrators, as well as legislatures and the public, in embracing a way of thinking that aligns universities with "corporate culture." He defines corporate culture as "an ensemble of ideological and institutional forces that functions politically and pedagogically both to govern organizational life through senior managerial control and to fashion compliant workers, depoliticized consumers, and passive citizens" (p. 429). As I turn to writings that inform the relations of corporatization to faculty subjectivity and governance, I am not of the mind that faculty have become wholly "compliant," "depoliticized," or "passive," to borrow Giroux's words. However, there are compelling reasons to argue that market logic repositions faculty and to inquire into the effects of this repositioning.

In outlining the effects of corporatization's intensification on public research universities, I draw from, but expand on and elaborate, Gumpert's (2001) identification of three mechanisms that legitimate corporatization: academic consumerism, academic management, and academic stratification, and add a fourth, "crisis." I link these related areas to the repositioning of faculty and governance.

#### ACADEMIC CONSUMERISM

Supported by discourses of fiscal need, consumerism is linked to commercialization, or "efforts within the university to make a profit from teaching, research, and other campus activities" (Bok, 2003, p. 3). Consumerism perpetuates seemingly commonsense ideas that institutional purposes and individual practices link themselves to utilitarian and profit-oriented enterprises. As David Noble (2003) points out, consumerism and commercialization constitute the commodification of education, in which education becomes a product "manufactured for exchange on the market" (p. 45).

In corporatizing universities that search for profit, the following structures and activities are becoming increasingly commonplace: university-corporate financial partnerships; curricula and degree programs that



serve corporate hiring needs; corporate-style management and accounting methods; faculty work as high-paid corporate consultants; the funding of labs, faculty salaries, and graduate assistants to perform research for and by corporations; and universities whose boards of regents or trustees are dominated by “business leaders” (Nelson and Watt, 1999, p. 90). Even after Vietnam-era protests challenged university involvement in war research, many government-corporate-campus partnerships remained intact, only to be strengthened in the Reagan era, during which university-corporate partnerships flourished (Nelson and Watt, 1999, p. 85). Indeed, university-industry collaboration and industry funding for research in the sciences have grown significantly over the past two decades (Zusman, 1999, pp. 128–129), encouraged by the passage of the Bayh-Dole Act of 1980, which allowed (or, one could argue, “incentivized”) universities to patent inventions university researchers developed with federal funds (Slaughter and Leslie, 1997, p. 45). In short, the instrumentalism and profit motives underlying market-based ideologies have rapidly effected numerous changes in universities, as evidenced by the proliferation of intellectual property rights policies, technology transfer offices, licensing agreements, and the creation of spin-off companies (Giroux, 2002; Marginson and Considine, 2000; Rhoades, 1998; Slaughter and Leslie, 1997; Zusman, 1999). These new activities not only comprise the continuation of universities’ service to business ends and interests that Veblen (1918/2003) described. The focus on revenue generation actually positions universities as part of the market, fostering a need to adapt its “efficient” and “responsive” practices, particularly in an “environment” of economic exigency.

#### “CRISIS”

The institutionalization in public universities of market ideologies is supported by talk of fiscal crisis and the slashing of public budgets.<sup>2</sup> As ostensibly “public” universities receive less public money from the state, they search for alignments with profit-making ventures. The present moment may mark an irreversible trend in the decline of public funding of higher education and the rise of entrepreneurial institutions,

<sup>2</sup>On declines in federal and state spending on higher education, see Benjamin and Carroll (1998), Gladieux and King (1999), McGuinness (1999), Tierney (1999), and Zusman (1999). Benjamin and Carroll (1998) foresee for higher education “a lengthy period of slow growth, if not outright decline, in real public revenues” (p. 97). Mention of economic decline is often a prelude in writings that call for increased institutional “responsiveness.”

units, and faculty who compete for declining resources in the “free market.” While privatization of public universities may be a consequence of the decline in public funding (Zusman, 1999, p. 113), it is also made possible by ideologies that value commercialism and entrepreneurship *and by actors who act on those ideologies.*

An ongoing “rhetoric of crisis” (Birnbaum and Shushok, Jr., 2001; Scott, 1995) could be said to support a shift to market practices and associated “management fads” (Birnbaum, 2000, p. 143) that some would construct as inevitable or necessary. Prewitt (1993) has described the “crisis” as one “in which research universities have had to redesign their research mission in response to changing priorities by funders” (p. 203), a move encouraged by questions of public confidence and credibility. “Crisis,” real or imagined, makes institutions vulnerable to critique; critique exacerbates crisis by escalating a crisis of confidence; and a crisis of confidence in turn makes institutions vulnerable to calls for reform or change (Birnbaum, 2000, pp. 143–145 and pp. 205–6). It also enables the consent of faculty. Nelson and Watt (1999) argue that “What many faculty do not realize, however, is that the ‘crisis’ has been partly manufactured and certainly magnified by administrative determination to redistribute and reinvest university funds” (p. 90), for example, away from humanities departments and tenure-track lines to new buildings aimed at promoting “industrial partnerships” and “commercially relevant activities” (Rhoades, 1998, p. 3).

At the same time, what is occurring is a blurring of the boundaries between public interest and corporate values, in which the two are framed as, if not synonymous, continuous with each other. For example, Bok (2003) casts the 1980 Bayh-Dole Act in a narrative of progress regarding research universities’ accountability, conflating the privatization of knowledge as intellectual property with the public interest. He argues that prior to the Act’s passage,

few universities could pretend that they were making much effort to review the work in their laboratories for advances that could be put to practical use. Only when Congress expanded their rights to seek patents and collect royalties for their discoveries did campus administrators mount a serious effort to help the public gain a greater return on the billions of tax dollars invested in academic research. In this case, then, the profit motive proved decisive in causing universities to fulfill their responsibility to serve the public. (p. 28)

Bok’s argument in favor of “incentives to elicit all of the behaviors that a society has a right to expect” (p. 28) draws on a corporate narrative

that seeks to bridge distinctions between private markets and the public good, converting the necessity of seeking funding into a virtue. This recrafting of narratives and ideas about the university and academic work to present privatization as continuous with “tradition” is not uncommon, as I discuss later.

These convergences of “crisis,” demands for efficiency, and calls for economic contributions suggest neoliberalism’s success in making managerialism appear to be logical and necessary in universities (Scott, 2001, p. 131). As these moves toward corporatization take place, positions and relations within universities change.

#### MANAGERIAL SPACE

Academic management serves as a not-so-invisible hand whose principal tasks lie in implementing (and naturalizing) market practices. Management entails monitoring changes in enrollment patterns and state appropriations, cultivating new resources to reduce dependence on public monies (revenue generation), and ensuring compliance with external demands (for example, to demonstrate faculty productivity and student learning outcomes) (Gumport, 2001, pp. 94–95). These increasingly central activities, Gumport (2001) suggests, allow management to assume “more organizational space, visibility, and legitimacy in running the enterprise” (p. 96). While Kerr (1963/2001) calls this “managerial revolution” (p. 22) a result of universities’ increasing size, complexity, and interactions with the “external” world, one could also frame it as symptomatic of a competitive quest for rankings, money, resources, students, and faculty (Bok, 2003, p. 9; Lazerson, 1997). As Geiger (2002) comments, the managerial revolution was “prompted in part by fiscal pressures [and] regulatory burdens” and ultimately “facilitated adaptation to privatization and reduced the purview of academic governance” (p. 83) as the budget became the primary determinant of university activities.

Management creates strong incentives for faculty to change their behaviors through weighting sponsored research in promotion and tenure reviews or changing formulas for the recovery of indirect costs for discretionary funds (Duderstadt and Womack, 2003, p. 54). In their study of Australian universities, Marginson and Considine (2000) point to management’s use of “a ‘naturalised’ system of economic incentives and indicators” designed to “change the way that researchers think about research, and how they see themselves as researchers” (p. 164). An *Atlantic Monthly* article (Press and Washburn, 2000) quotes Jon Sandelin,

a senior associate at Stanford's Office of Technology Licensing (OTL), on the efficacy of incentives to create an entrepreneurial culture:

"You have to understand — initially the department chairmen and school deans weren't thrilled by having this new activity that was diverting the attention of the faculty away from teaching and research," he explains. "So how do you offset that? You make them stakeholders — you make them beneficiaries." Once professors and their departments learned that they could earn a cut from inventions, Sandelin says, they became more enthusiastic about bringing their ideas to the OTL. (p. 46)

These tactics infuse everyday thinking at the levels of discipline, department, and university.

With an eye to the ways in which managerial practices act on academics as commercialization takes hold, Hackett's (1990) study of the organizational culture of academic science detailed an increasing emphasis on "the quest for resources and legitimacy" (p. 242). Blending resource dependency theory and institutional theory, which emphasizes shared understandings of appropriate behavior, Hackett argued that as management implemented structural changes, such as the creation of administrative positions for research oversight and technology transfer, research centers and institutes, and "opportunity funds," cultural changes occur "that reflect the tension between traditional values of education and scholarship [e.g., communality and disinterestedness] versus current demands for accountability, responsiveness, and efficiency" (p. 252). Specifically, he noted that institutions' positioning of academic units as "cost centers" encourages "entrepreneurial activities of professors ... because the university deliberately treats them as 'small businesspersons' responsible for obtaining from outside resources their laboratory expenses, a portion of their salaries, and the salaries of their students and staffs" (p. 257). Moreover, a number of authors argue that managerial contexts weaken faculty participation in institutional governance as faculty cede decision-making responsibility to administrators and focus on working within their disciplines "as self-promoting free agents" (Finsen, 2002, p. 71; Lyall, 2001, p. 17).

#### COMPETITION AND VALUE

Market logic's privileging of certain departments and areas of study in universities augments academic stratification both within and among institutions (Kerr, 1963/2001; Marginson and Considine, 2000). As

Zusman (1999) notes, “humanities and social science programs may be at increasing risk, as more universities implement budget systems that require departments to generate income equal to their costs. By contrast, science and professional programs that can continue to attract extramural funding or charge high tuition will be more secure” (p. 116). In budget- and market-driven contexts, the campus becomes less a “community of scholars” than a space of competing market niches, or “eternal class struggles” (Kerr, 1963/2001, p. 45). Questions of value are subordinated to a market logic that stratifies “academic subjects and academic personnel based upon the increased use value of particular knowledge in the wider society and its exchange value in certain markets” (Gumpert, 2001, p. 99). A marker of faculty value and the value of research is revenue generation, which has been reconfigured as a “common good,” even as it benefits some more than others.

Slaughter and Leslie’s (1997) cross-national analysis of globalization’s role since the 1980s in accelerating the encroachment of profit motives into the academy points to the ways decreases in funding to the humanities and incentives for faculty to participate in product development in science and technology encourage “academic capitalism,” or “marketlike efforts to secure external moneys” (p. 8). A crucial, yet underelaborated, aspect of their analysis is their suggestion that this process is actually facilitated by faculty, who acquiesce to market behaviors in their quest for money, power, and prestige (p. 70). Their empirical work chronicles the confusion of faculty in lower ranks who “had difficulty conceiving of careers for themselves which merged academic capitalism and conventional academic endeavor” (p. 173) in contrast to faculty who came to “view profit making as a means to serve their unit, do good science, and serve the common good” (p. 179). Unfortunately, although Slaughter and Leslie offer some snapshots of how faculty understand and position themselves in relation to changing norms, their analysis does not extend to the ways local dynamics, such as management and governance, affect and are affected by structures that call for market-like behaviors (see Marginson and Considine, 2000, p. 53).

In corporatizing universities, what positions are available to and taken up by faculty? Two extremes could be pointed to. On one end, Slaughter (2001) has detailed the commodification of faculty “stars” who generate external funds or markers of prestige, “free agents who take advantage of the market and see themselves as individual, economic actors rather than as part of a collegium.” On the other end are part-time instructors on whom institutions increasingly “depend” — and

whose heavy teaching loads effectively subsidize the “free” time for lucrative research for “productive” scholars (Johnson, 2003, p. 77). Both could be thought of as a postindustrial, flexible workforce, in which, as Johnson, Kavanagh, and Mattson (2003b) comment, “At the high end of the corporate world, people speak of consultancies; at the low end, of temping. What both have in common is an end to stability” (p. 12). Depending on one’s position, this is a flexibility of privilege or of contingency. And either type of flexibility has implications for faculty members’ understandings of their work, their relations to universities, and their ideas of universities themselves. Yet there are many faculty who fit neither of these categories of star or adjunct laborer, but whose work and subjectivity are defined by market logic.

Before moving to a closer view of how corporatization works on faculty members’ understandings of self, let me summarize the view of corporatization I am advancing. It is focused specifically on the ways faculty members are positioned by the integration of market logic into ways of thinking about and acting in universities and the colleges, departments, and disciplines they work in. Several themes are salient. First, as neoliberalism naturalizes corporatization in the social generally, market alignment becomes a commonsense means for public research universities to respond accountably and efficiently to changing “environments.” Second, in a competitive environment, with prestige and resources at stake, universities call on faculty to engage in market behaviors, which are described in terms of serving the public. Increased managerialism, in tandem with the commercialization of faculty labor, exacerbates faculty hierarchies (Rhoades, 1998) as reward structures privilege some over others, reconfiguring faculty members’ relations to their universities as communities.

### SHIFTING FACULTY POSITIONS IN THE MARKET

While researchers attend to the ways the growth of corporate culture exacerbates faculty stratification and changes behaviors, they attend less to the ways it contributes to shaping faculty subjectivity. In a notable exception, Wesley Shumar (1997) draws on the work of Louis Althusser (1971) and Pierre Bourdieu (1988) to theorize the ways market logic can shape academic subjectivity. Althusser offers the idea that subjects are constituted through ideology and through ideology come to know, or imagine, the social world and their relations to it. In seeking to understand how capitalist ideologies can interpellate, or hail (and thus

create), faculty as subjects, Shumar plays on the idea that capitalism needs subjects who are subjected to its system but seemingly act freely: “the market economy needs a subject imbued with agency as well as trained for a role. Capitalism needs a subject who passively accepts his subjugation but acts as a free agent in the marketplace” (p. 19). To make sense of how capitalism addresses faculty members as subjects, Shumar turns to Bourdieu’s concept of *habitus*, or the internalized interpretations of the rules that govern a social field that actors draw on as they construct strategies for action. Following Bourdieu (1988), the university as a social field is a “space of the relations of identity and difference” (p. 2) that hierarchically classifies individuals according to particular distinctions. In a system in which actors must “make a name for oneself” (Bourdieu, 1988, p. 2), academics’ legitimacy and authority rest on the possession of cultural capital, such as forms of symbolic expression, institutional affiliation, or disciplinary location.<sup>3</sup>

As Shumar analyzes academics’ quest for legitimacy and cultural capital, he describes a field in which faculty members’ strategies for action and understandings of their strategies are conditioned by long-standing ideologies of democratic competition and meritocracy. Academic competition is exacerbated by capitalism’s ongoing crisis, the “perpetual anxiety over the search for larger profits” (p. 24) that has come to structure educational institutions. As fiscal crises (as well as talk of them) have “forced universities to see themselves as businesses providing a product to a market” (p. 24), he argues, the subjectivities of institutional actors change and the logic of competition becomes a significant part of the cultural field that disciplines faculty. Shumar’s

<sup>3</sup>In institutional contexts in which market logic as ideology stratifies faculty in a seemingly natural system, Bourdieu’s (1988) theory of a struggle for legitimacy and the distinctly economic (capitalistic) metaphors underlying his thinking about the workings of distinctions among faculty seem particularly apt for my purposes. However, the isomorphism he creates between faculty position, disposition to act, and actual practices has an overly deterministic and mechanistic ring to it that leaves little room for play across fields, even as his work suggests fluidity, particularly given the multiple fields academics move across and multiple sources and types of cultural capital, such as embodied cultural capital (refinement) or institutional cultural capital (affiliation with a valued institution). For example, he argues that academics’ struggle to legitimize certain criteria and acquire cultural capital is constituted by “a plurality of rival principles of hierarchization” (p. 11), such as hierarchical distinctions based on institutional or disciplinary location, that are often multifaceted. Nonetheless, his theorization of the ways academic subjects are positioned does not fully take into account contradictory or multiple locations. Because *habitus*, or actors’ ideas of possible actions in a given field, is formed by one’s position in a structure, Bourdieu’s conceptualization ends in a depiction of actors whose perceptions and actions flow directly from singular positions, suggesting a reproductive model of action and interaction.

focus is on the ways the fiscal and job market crises of the last two decades have accelerated the naturalization of market ideologies of higher education and subjected faculty and would-be faculty as individual competitors with a limited range of strategies and resources in an academic marketplace. In the search for cultural capital, actors engage

in an active strategy, within a given field, where there are limits to access of resources and limits to what can be done in that field. . . . And the actor is not always conscious of how a particular strategy works to his/her advantage or disadvantage. It allows the illusion of democratic competition, because we don't calculate the advantages or disadvantages that come with different concentrations of cultural capital and differing habituses. (p. 21)

Even as academics are subjected as market actors on an unequal "playing field," the idea of meritocracy leads faculty to internalize responsibility for failure or success rather than critically analyzing the system itself. Shumar's analysis suggests a naturalization of academic market logic as a system that individualizes faculty and fairly distributes rewards, resources, and recognition.

In a system of competition for legitimacy, more is at stake than material positioning. Rosovsky (1990) points out that academic areas with "practical value give their practitioners considerable financial and non-financial rewards" (p. 221). He says, "Those who profess sponsored subjects receive many advantages: summer salaries, student assistantships, travel funds, better offices, modern equipment, and so on. We should also note the psychological benefits that derive from research sponsorship or a high market price for particular skills. It is a tangible sign that someone cares — that there is demonstrable value in the intellectual product" (p. 221). Although he comments that this unequal distribution of benefits can "be the cause of some envy" (p. 222) for those less advantaged, he does not venture to mention what it can "cause" for those privileged by the system. Nor does Rosovsky (1990) acknowledge institutional complicity in this material and psychic stratification. Rather, he characterizes the market's influence as inevitable: "These differences are not created by the university; to eliminate them is beyond its power. The flow of research funds is determined by government, industry, and philanthropy, and by priorities and fashion" (p. 223).

As I mentioned above, some argue that entrepreneurialism and stratification cause a decline in participation in university governance as faculty seek resources and privileged faculty eschew institutional "community" responsibilities. For example, Slaughter and Leslie's (1997)



depiction of a competitive environment that asks faculty to think of themselves as market actors in an atmosphere of scarcity is highly suggestive of a decline in shared governance as well as “the concept of the university as a community, where the individual members are oriented primarily to the greater good of the organization” (p. 22; see also Duderstadt and Womack, 2003, p. 55). And Kerr (1994) described what he called a “new academic culture,” in which institutional reward structures that favor published research, external funding, and national recognition over teaching and participation in internal governance induce faculty to demonstrate less commitment to their “citizenship obligations” in an academic community and “more attachments to economic opportunities off campus.” While their arguments are no doubt reflective of a trend in a competitive and mobile workforce, they do not account for those faculty who do attend to their “citizenship obligations,” albeit in something of a changed “community” in which material and psychic rewards position faculty differently.

Thus, it is not merely a collapse of community or governance that is at stake but the shifting subjectivities of “self”-governors, particularly as they govern the very system that positions and repositions them. Rather than understand governance as a structure that will implode as the common good is lost to self-interest and competition, a more fruitful line of inquiry is to ask how differently positioned faculty participate in its processes and how their participation may relate to changing ideas of faculty work and universities. As corporatization is naturalized, a process facilitated by a particular distribution of material and psychic rewards, and as it refigures service to the “common good” as generating revenue for the university or serving the public through marketable research products, how do governors govern? And how does this shift relate to ideas of university communities, particularly in relation to governance?

#### IDEAS OF UNIVERSITIES AS COMMUNITIES

Ideas of the university, be they founding principles, myths, or sagas, have been said to orient faculty to shared visions of what it means to work in universities. Clark (1987) says, “The profession is richly endowed with supreme fictions upon which academics draw to explain themselves and others the value of what they are doing” (p. 140). Yet, as forms of social interpretation and communication, these fictions do not stand as fixed narratives but are interpreted differently and put to

different uses across contexts. In other words, these ideas are never unitary at a given moment or stable over time.<sup>4</sup> In particular, they take on new meanings as market ideologies shape university practices and faculty work. Altbach (1999) has commented, “There is little doubt that the academic profession will be subjected to increased controls as academic institutions seek to survive in an environment of financial difficulties. Professorial myths — of collegial decision making, individual autonomy, and the disinterested pursuit of knowledge — have come into conflict with the realities of complex organizational structures and bureaucracies” (pp. 279–80). And Birnbaum (2000) describes narrative as “a compelling story of ideals, purpose, and continuity that provides participants with meaning. . . . In the United States, the educational narratives of the past have been stories of personal virtue, civic participation, democracy, and social justice. The narrative goals of the present appear to be economic utility, consumerism, and technology — a weak foundation on which to build a just social order or excite the imagination” (p. 226). Yet, as Birnbaum himself has pointed out, this latter narrative does not stand as a replacement to the past, but takes on new meanings in relation to it. Thus, a mythical idea that the “‘community of scholars,’ is insular, protected, safe from the outside world” (Johnson, Kavanagh, and Mattson, 2003a, p. 1) continues to have a life in the present, despite the fact that this “community” has changed considerably with academic corporatization. My goal is to inquire into changing meanings of ideas of a “community of scholars,” “collegiality,” and the “common good” as they frame faculty members’ relations to universities and market logic refigures these ideas.

#### COLLEGIALITY AND CONSENSUS

The internal organization of universities has traditionally been “based on the idea of a community of scholars and shared governance” (Altbach, 2001, pp. 21–22). The community of scholars’ self-governance is linked to ideas of autonomy and consensus (Hardy, 1990, p. 393) that presume a form of unity, embedded in shared purposes or a “common good.” In other words, community, consensus, and the common good depend on a unified, stable institution that has a “center” around which

<sup>4</sup>Thus, I do not take up Clark’s (1972) idea of organizational saga, which “refers to a unified set of publicly expressed beliefs about the formal group that (a) is rooted in history, (b) claims unique accomplishment, and (c) is held with sentiment by the group” (p. 179). Sagas’ unitary nature and durability over time do not reflect actors’ different or changing interpretations.

members organize themselves. In an ideal form, the community of scholars promotes collegial views of governance, characterized by an “emphasis on consensus, shared power, common commitments and aspirations, and leadership that emphasizes consultation and collective responsibilities” (Birnbaum, 1988, p. 86). An emphasis on collegiality presumes that “[a]ctions are taken and decisions made by actors in their attempts to benefit the larger institution” (Hardy, 1990, p. 409). Yet ideas of collegiality could be said to reify shared values and the common good by downplaying the role of conflict, power, and ideology in the creation of consensus (Pusser and Ordorika, 2001, p. 154).

My discussion of faculty stratification may suggest that I promote an opposite of a collegial model of governance, a political model of self-interest, which “emphasizes dissensus, conflict, and negotiations among interest groups” (Hardy, 1990, p. 402). Such a stark dichotomy seems too easy, as it portrays actors positioned as “consensual community members” or as “antagonistic community members,” just as the dichotomy between those who involve themselves in institutional life and those who do not reduces the complexity of faculty members’ relations to university communities. Instead, I want to ask how the idea of community works in a moment when some writers continue to invoke community in calls for academia to reshape itself in response to difficult economic times and external demands (e.g., Tierney, 1999, pp. 10–12). What does it mean to call for community to respond to the very difficulties, such as fiscal constraints and market alignment, that have raised calls for supplanting community with managerialism and that some argue has weakened community by encouraging individual entrepreneurialism?

#### IMAGINED COMMUNITY

To consider the university as a “community of scholars” is to consider how actors create the institution in their imaginations, in the sense of Benedict Anderson’s (1991) idea of “imagined communities.” In his work on the rise of the nation-state, Anderson suggested that a community’s daily functioning is based on shared cultural understanding that includes a relationship to the past. And he linked the rise of capitalism to new forms of consciousness, including popular nationalistic movements, which were then co-opted by various forms of official nationalism. These processes involve the transformation of individual and collective identities, of the meanings of traditions through selective remembering

and forgetting, and of community norms and boundaries of who is in or out. Similarly, as universities and faculty are increasingly marketized and bureaucratized, community takes on new meanings as individual and collective identities are refashioned. Shumar (1997) suggests that the seemingly innocent, nostalgic idea of a “community of scholars” may actually serve to uphold corporatization:

Certainly inherent in its role as holder of culture is the perception of the university as a society apart; the ivory tower. As a community unto itself, it must remain pure, separate from secular society, so that it can uphold all that which is good, true, and beautiful. In our culture’s imagination, from the outside, it is a sacred space. Within the ivory tower, the university community often terms itself, in its own version of this idea, as a “community of scholars.” (p. 62).

This image continues even as “research universities in particular are shedding their cloistered existence” (Hirsch, 2001, p. 145) to further their ties with corporate culture.

Shumar points to two uses of the construct “community of scholars” for members of the imagined community. First, selective remembering and forgetting allow for the construction of a golden age free of a century of corporate influences on higher education. Second, idyllic ideas of community can obscure tangible material and ideological changes in the “community,” such as market alignment or faculty stratification. This stratification is two-fold and includes divisions between faculty who are revenue-generating and those who are not and between tenure-track faculty and adjunct laborers.<sup>5</sup> Thus, even as practices and relations change with intensifying corporatization, the nature and implications of these changes are rendered opaque. Nonetheless, community continues to stand as an ideal.

In a defense of shared governance, Gerber (1997) invoked community to assert that “The ties that bind teachers, researchers, and students into a community of scholars are qualitatively different from the ties that bind stockholders, managers, and employees in a private business” (p. 18). Whether this is a descriptive or prescriptive statement is debatable, as neoliberalism and market practices collapse the distinctions between universities and corporations. In fact, as I have pointed out,

<sup>5</sup> See Anderson (2002) on the growth in the U.S. of part-time faculty during the past two decades by 79 percent to more than 400,000. See Johnson (2003, pp. 77–79) on the frequent, possibly willful, ignorance of tenured faculty of how their privileges depend on others’ labor, “prevent[ing] a more vigorous response to the use of casual labor” (pp. 78–79), and perpetuating a widening class divide within the “community of scholars.”

some suggest that faculty members' identifications with their institutions lessen as they participate in the market (e.g., Hamilton, 1999; Hollinger, 2001; Slaughter and Leslie, 1997). But more interesting is how their identifications shift as they participate in the market. Keller (2001) has commented that even while many faculty spend more time on work external to the institution (working for government agencies, foundations, and corporations) than internal to it, they continue to evoke ideals they no longer live out: "But the professors continue to talk about the community of scholars, and they demand a full partnership in the governance of the institutions to which they are attached, even as their allegiance to their home college or university and to fellow scholars on campus becomes more tenuous" (p. 312). Keller seems to ignore the possibility that faculty may be consciously negotiating two simultaneous yet contradictory sets of ideas, or that given conditions in which they work, they may not perceive contradictions. In other words, allegiance to external markets and participation in community may be compatible in some faculty members' eyes. In this sense, defining academic identities or identifications through a dichotomy of "locals" (institutional identity) versus "cosmopolitans" (disciplinary identity) does not take into account the ways each can shape the other (see Clark, 1987, pp. 270–272).

#### THE COMMON GOOD

Even as faculty labor is increasingly individualized in a competitive environment and as universities and the market position faculty differently, an idea of the "common good" and shared values continues as an ideal. Indeed, over forty years ago, Kerr (1963/2001) worried about the loss of guild-like status in describing the multiversity: "A community, like the medieval communities of masters and students, should have common interests; in the multiversity, they are quite varied, even conflicting. A community should have a soul, a single animating principle; the multiversity has several" (p. 15). Yet nostalgic ideas of shared purposes can obscure the ways in which "goods" are increasingly less "common" and universities' purposes are not only multiple but contested. By this, I refer not to commentaries that fragmentation, differentiation, and institutional size make a common purpose elusive (e.g., Altbach, 1999, p. 285; Wolff, 1969, p. 35) but to the rapid shifts in university practices that position faculty multiply in relation to differing "values." Glotzbach (2001), for example, contends that "a shared understanding of a college's or a university's fundamental values, aspirations, and operating assumptions establishes the context for fruitful deliberation on

specific issues” (p. 18). Such a seemingly innocent statement reifies institutional values as both permanent and uncontested (and to press this further, perhaps not to be contested). An assumption of shared values is nostalgic at best and silencing or pathologizing of dissent at worst. It ignores points such as Birnbaum’s (1998) that dissensus can offer fruitful insights in decision-making processes as well as his identification of the fallacy of arguments that if all would act in an institution’s best interests, they would agree on what those interests are (p. 136).

Melody (1997) points out that universities and faculty can no longer defend their current positions in society “by resorting to the idealist notion of the university as a community of scholars which must be supported and protected from outside interference so that it may seek new truths through creative thought” (p. 74). Idealist notions of autonomy and disinterestedness, particularly in relation to independence from external influences, stand as a nostalgic barrier to acknowledging that the university functions as “a major public institution in society and must be examined in that context” (p. 74). Ideas of community and common purpose obscure not only the changes taking place in definitions of universities’ purposes and the work of faculty, but also constraints on shared governance as the space of the possible is redefined.

### MANAGING PROFESSIONALS

As “shared purposes” and “common good” are increasingly prescribed by managerial practices linked to the market, the present moment circumscribes the sorts of decisions that individual and collective actors can make in governance contexts by defining the problems and questions to which governors must respond. Thus, the very notion of shared governance is limited when the terms by which actors can make decisions are narrowly defined or pre-defined. As one example, Benjamin and Carroll (1998) argue that the decentralized structure of departmental and unit decision-making limits effective resource reallocation as institutions respond to changing demands. Their desire to centralize governance (an effort, they say, to minimize interest group behaviors and to offer a “common” view for decision-making) through an iterative system that they claim is neither “top-down” nor “bottom-up” focuses on putting “in place comparative, university-wide evaluation criteria for decision making” (p. 104). In other words, an “academic commons” would focus on institutional priorities as it evaluates choices. This formulation falls into the trap of presuming the goodness of institutional priorities and

constructs a closed system of limited choices. Moreover, Benjamin and Carroll's view of an "academic commons" depends on aligning departmental goals with institutional goals. In order to secure this alignment, they explain, "the institution must provide the incentives for individuals to support the institution's objectives" (p. 115).<sup>6</sup> This "incentivizing" effectively limits the extent to which faculty participate in developing decisions about institutional policy — and is symptomatic of the very market logic that I hunch the incentives are designed to perpetuate. In other words, it partakes of a disciplining of faculty subjectivity. Without deliberation of a "common good," the "academic commons" makes decisions based on seemingly given criteria in practices more akin to managerial accounting than to the deliberation of value.

Despite the encroachment of neoliberalism on the form and content of governance, whether for purposes of consensus-building or checking the zeal of administrators, faculty participation in shared governance continues to be framed as integral to campus communities. On one hand, shared governance has been upheld as a means of ensuring broad support for and institutionalization of campus changes, as a mechanism for ensuring faculty involvement and accountability, and as a "balance to the corporatism of trustees and governing boards" (Hines, 2000, p. 116). A primary claim is that a corporate or managerial model of governance can create opposition among faculty who prefer a *sense* of involvement in decision-making (Tierney, 1999, p. 45). On the other hand, arguments for the need for efficient responses to legislators and/or the market frame shared governance as unnecessarily cumbersome, and advocate hierarchical over collegial models of governance (e.g., Association of Governing Boards, 1996).<sup>7</sup> Critiques center on academics' inefficiency in deliberating, propensity to stall initiatives, battling over turf issues, and refusal to respond quickly to external constituencies (Longin, 2002). Moreover, some argue that a departmental governance structure fragments decision-making such that there is little consideration of, concern with, or (faculty) accountability for university-wide

<sup>6</sup>Bess (1988) highlights that advocates of collegial models "would insist that 'inducements' must be offered to individuals to participate fully and be committed to the achievement of organizational ends" (p. 3), a construction that belies a "pure" common good as a fiction constituted through individualizing efforts to "incentivize" faculty alignment with the university.

<sup>7</sup>Gerber (1997) offers a cogent critique of the AGB report's premises, particularly that of equating universities and businesses. See also Hamilton (1999) for a comparative analysis of the AAUP and AGB's stances on institutional governance. And Ramo (1997) offers rebuttals of several prevailing ideas about the cumbersome nature of shared governance.

issues, needs, and priorities (Bok, 2003, p. 189; Duderstadt and Womack, 2003) and that faculty's ignorance of budget processes and multiple demands on administrators and institutions renders shared governance problematic and "faculty views vulnerable to dismissal" (Kolodny, 1998, p. 14).

I do not wish to ignore threats to the structure of shared governance, but neither do I wish to dwell on them. As I suggested earlier, contexts of "crisis" may offer an opportune moment for calls to centralize authority. They may also contribute to reshaping faculty subjectivity and the form of their decision-making through governance. Thus, threats of managerialism and neoliberalism exist *even with* ostensibly robust systems of shared governance. Neoliberalism's effectiveness in naturalizing the commercialization of the university and faculty work has shifted the terms by which many faculty understand their work. As a discourse (albeit not seamless), or a way of thinking and acting, neoliberalism's market logic increasingly marks the limits of the thinkable and the unthinkable. It is an individualizing discourse of Darwinian survival for institutions and individuals, who need resources and reputation to perpetuate themselves, that contributes to shaping faculty members' subjectivities as academics and participants in governance.

Cooper (2002) makes the point that in a moment of competing definitions of what counts as knowledge — a Newmanesque ideal of liberal knowledge for its own sake, a means of social self-interpretation, or commodity for exchange — and corresponding definitions of who and what faculty members are as teachers, researchers, and members of communities, faculty respond differently to the multiple narratives that frame them: "Some academics have retreated into a bunker-like mentality, repeating mantra-like phrases such as 'the pursuit of truth' or the 'life of the mind' as a means of defence against corporatization. Others have adapted to the corporatization process" (p. 208). Yet others draw on ideas of academic autonomy to think of themselves as "independent professionals" (Rhoades, 1998, p. 4) unaffected by privatization, corporatization, and restructuring.

Despite differing faculty responses to corporatization, the stark contrasts that have historically been drawn on to characterize faculty and administration continue to circulate. Duderstadt and Womack (2003) comment that "in many universities the concept of management is held in very low regard, particularly by the faculty. To both students and faculty alike, the term *university administration* has a sinister connotation, in the same way that *federal government*, *bureaucracy*, and *corporate*



organization do” (p. 134). And Rhoades (1998) characterizes administrative practices as positioning faculty as “managed professionals”: “in the context of colleges and universities that are increasingly privatized and capitalistic in their orientation, faculty are increasingly managed professionals. And the story of social relations between faculty and managers is one of the ongoing negotiation of professional autonomy and managerial discretion” (p. 28). As I hope my discussion has made clear, I want to complicate narratives that pit faculty and administration in opposition. Such a neat division is untenable in the present “environment.”

Over forty years ago, Paul Goodman (1962) contrasted the “administrative community” (p. 80) to the ideal of a community of scholars. An administrative community coerces conformity in a community of scholars, “enforc[ing] a false harmony in a situation that should be rife with conflict” (p. 8). It rewards those who share the administration’s disposition, diminishing the free and conflicting thought Goodman considered essential to vital self-governance. In many ways, his thinking was prescient of an epoch of performance measures, accountability, efficiency, and standardization as he described a new academic subjectivity:

The colleges and universities are, as they always have been, self-governing communities. But the personal relations in such communities have come less and less to consist in growing up, in the meeting of veterans and students, in teaching and learning, and more and more in every kind of communication, policing, regulation, and motivation that is relevant to administration. The community of scholars is replaced by a community of administrators and scholars with administrative mentalities, company men and time-servers among the teachers, grade-seekers and time-servers among the students. And this new community mans a machine that, incidentally, turns out educational products. (p. 74)

Given competing and shifting ideologies that circulate to define academic work, I draw on Goodman’s thinking about the “administrative community” in a context of the naturalization of neoliberalism to rephrase Rhoades’ idea of “managed professionals” to ask whether, in the context of governance, we might speak of faculty as “managing professionals.” This seemingly oxymoronic term underscores the duality of governing and being governed and the multiple roles faculty live out simultaneously and resonates with the premises of “governmentality.”

## GOVERNMENTALITY

In her defense of shared governance, Mary Burgan (1998) makes two points I draw on to connect my questioning of faculty participation in governance to the idea of “governmentality.” First, she attaches shared governance to academic freedom, citing the American Association of University Professors’ (AAUP) history and a belief that “such freedom could not be passive, but the professoriate must actively assert its own professional expertise in ‘government.’ Freedom, after all, involves process as well as principle.” Second, she describes the AAUP’s 1966 “Statement on Government of Colleges and Universities,” which outlines principles of shared governance, as having “codified established faculty as a strange professional hybrid: on the one hand, they were employees; on the other, they were managers of their own employment.” This hybridity positions faculty as dually subjected, living out positions of subject and object as they negotiate two related but differing roles. In each case, it is key to keep in mind that “the alleged autonomy of the subject, its freedom to participate in communicational transactions . . . , is conditional upon its subjection to the idea of the state” (Readings, 1996, p. 181). Wiegman (1997) describes this freedom in subjection as essential to the academy’s project of forming the academic subject, or “the social subject produced out of the contradictory tie between a capitalist economic order and the political philosophy of democratic citizenship — that subject who is able simultaneously to insist on its own willful self-creation and maintenance while being disciplinarily tied to the economic and political hierarchies intrinsic to capitalism” (p. 7). This self-creation takes place as the university asks faculty to think differently about the nature of their work and to exercise their freedom in specific ways.

The idea that faculty are simultaneously positioned by and position themselves in relation to changes in the academy, as well as the duality of acting as governor and governed, leads me to draw on Foucault’s idea of “governmentality” in seeking to understand how faculty subjectivity is at work in governance. Governmentality is a complex construct that includes the ways social institutions endeavor to guide, shape, and direct the behavior of others *and* the ways individuals govern themselves and their actions (Foucault, 1991). An elastic term, “governmentality” offers a conceptual fulcrum for understanding how faculty members move between governing the self as “individual” academics and governing the self as “governors,” or participants in governance, as they deliberate policy and practice. It is particularly useful for inquiry into what it

means when “governor and governed are two aspects of the one actor, whether that actor be a human individual or a collective or a corporation” (Dean, 1999, p. 12).

Gordon (1991) synthesizes Foucault’s work on governmentality broadly, as including “the relation between self and self, private interpersonal relations involving some form of control or guidance, relations within social institutions and communities and, finally, relations concerned with the exercise of political sovereignty” (p. 3). Dean (1999) offers another multifaceted definition of government:

Government is any more or less calculated and rational activity, undertaken by a multiplicity of authorities and agencies, employing a variety of techniques and forms of knowledge, that seeks to shape conduct by working through our desires, aspirations, interests and beliefs, for definite but shifting ends and with a diverse set of relatively unpredictable consequences, effects and outcomes. (p. 11)

Referring both to institutions’ efforts to shape individuals’ thoughts and actions *and* to individuals’ shaping of their thoughts and actions, government is directed toward a specific end, a “type of person, community, organization, society or even world which is to be achieved” (Dean, 1999, p. 33). Below I discuss techniques of government that are particularly relevant to understanding faculty subjectivity and governance. But first it is important to note how a focus on governmentality is particularly apt for understanding multiple techniques of guiding behavior in a neoliberal state.

Governmentality accounts for the blurring of boundaries between state and society as state and non-state apparatuses alike take part in legitimating “social good and personal orientation” (Packer, 2003, p. 137; Gordon, 1991, p. 36). Foucault understood the state as merely one element of government and turned much of his attention to the ways various micropolitics of power order populations. “Government,” Foucault (1982) explained, “did not refer only to political structures or the management of states; rather it designated the way in which the conduct of individuals or of groups might be directed. . . . To govern, in this sense, is to structure the possible field of action of others” (p. 221). Neoliberalism’s privileging of the market (even as it uses the state to do so) constitutes a form of government that works through multiple mechanisms and locations to direct actors’ behaviors. Because governmentality attends to realms beyond the state, Foucault’s work on governmentality “responds explicitly to . . . the changing status of liberal government and the recession of the welfare state ideal” (Dean, 1999, p. 2). Neoliberalism

decenters the state, making state control indirect as government is exercised through multiple locations, such as the market (Hay, 2003, p. 165). Thus, processes Miklaucic (2003) identifies as “de-governmentalization,” such as the privatization and corporatization of universities, should be analyzed “not as the diminishment of government, but rather its dispersion and transformation into different forms” (p. 327). And, consonant with the analysis of corporatizing public research universities that I have offered, these forms constitute “a market governed by rationalities of competition, accountability, and consumer demand” that work “through the deregulated choices of individual citizens” (Miklaucic, 2003, p. 328).

Without direct control, neoliberal forms of government rely on “mechanisms for governing ‘through society,’ through programs that shape, guide, channel — and upon *responsible*, self-disciplining social subjects” (Hay, 2003, p. 166). Dean (1999) explains, “The exercise of authority presupposes the existence of a free subject of need, desire, rights, interests and choice. However, its subjection is also a condition of freedom: in order to act freely, the subject must first be shaped, guided and moulded into one capable of responsibly exercising that freedom through systems of domination” (p. 165). Resonant with Wiegman’s description of the academic subject “freely” creating the self while subjected to a capitalist order, the faculty member creates the self as researcher, colleague, and governor and has choices for action that can be “modified by its environment” (Dean, 1999, p. 57). Governing, then, is situated at the intersection of an ethics of the self, which becomes a process of acting responsibly, with techniques of management, which organizes resources, rules of conduct, and populations (Dean, 1999, p. 12; Hay, 2003, p. 166).

With these broad ideas of governmentality as a backdrop — its focus on governing and being governed, its reliance on responsible actors, and its attention to multiple locations within to state and society, I turn to techniques of government. These techniques involve aligning faculty members’ interests with collective interests and naturalising those interests, associated behaviors, and abilities through the creation and surveillance of norms for faculty work.

#### ALIGNING THE INDIVIDUAL WITH THE COMMON GOOD

What Foucault (1991) called “the art of government” consists in creating continuity between the ideals of the state and the actions of

citizens so that all subjects govern themselves effectively, “which means that individuals will, in turn, behave as they should” (p. 92). Loyalty of subjects is predicated on aligning the goals of the state and the population (see Packer, 2003). In the context of universities, one might call the “common good” a means of government. This art of government, Foucault (1991) suggests, “is essentially concerned with answering the question of how to introduce economy — that is to say, the correct manner of managing individuals” (p. 92) so that the continuity between, for example, university and individual and collective faculty interests comes to seem natural. Thus, from an administrative viewpoint, government is predicated on “employing tactics rather than laws, and even of using laws themselves as tactics — to arrange things in such a way that, through a certain number of means, such and such ends may be achieved” (Foucault, 1991, p. 95). As a guarantor of security for its citizens, the state seeks to create an “isomorphism, an intimate symbiosis between the cares of government and the travails of a society exposed to the conflicts and crises of the liberal economy. The self-perception of society takes the form of a catalogue of problems of government” (Gordon, 1991, p. 35; see also Dean, 1999).

This exercise of government that links individual responsibility to the well-being of the collective relates to Foucault’s conceptualization of pastoral power, “a form of governing that links the individual to the state through an obligation to preserve the well-being of the citizen and attend to the needs of the population, in order to, in turn, assure a strong state” (Packer, 2003, p. 136; see also Foucault, 1982, pp. 213–215). The conduct of the individual contributes to a strengthened state through, for example, productivity. A transformed Christian ethics, pastoral power is “no longer a question of leading people to their salvation in the next world, but rather ensuring it in this world. And in this context, the word *salvation* takes on different meanings: health, well-being (that is, sufficient wealth, standard of living, security, protection against accidents)” (Foucault, 1982, p. 215). Faculty members, then, have a responsibility to protect and serve the institution through their actions; in turn, the institution will protect and serve them.

The connection of individual responsibility to the collective good, particularly in relation to security and “crisis,” is key to government. Packer (2003) expands on Foucault’s analysis of the metaphor of the governance of a ship (a common metaphor in governance manuals of the eighteenth century), pointing out that it “speaks to a concern with not only the men on the ship and the potential gain produced by successful shipping, but, importantly, the avoidance of catastrophes that

could befall such an enterprise” (p. 135). In this example, the governance of self and others for both safety and profit ties individual to collective, or corporate, aims (or the common good). Considered in relation to universities, which face perpetual problems, individual responsibility for revenue generation and the garnering of prestige serve collective aims and become normative orientations for faculty work and the purposes of research and teaching. Budget “crises” and “incentives” align faculty behaviors with the market in order to save the self and the “common good.”

Connected to this idea of risk that calls on individuals to align themselves with an institution’s interests, Dean (1999) writes of what he calls “technologies of performance,” a rationality of calculation and accounting, as a form of government:

the devolution of budgets, the setting of performance indicators, “benchmarking,” the establishment of “quasi-markets” in expertise and service provision, the “corporatization” and “privatization” of formerly public services, and the contracting-out of services, are all more or less technical means for locking the moral and political requirements of the shaping of conduct into the optimization of performance. . . . These technologies of performance present themselves as techniques of restoring trust (i.e. accountability, transparency and democratic control). (p. 169)

Efficiency becomes a responsibility that codifies connections between the individual and the common good while also enabling monitoring of achievements. These technologies accompany moves to make units self-managing, as in “cost centers” that employ RCM (see Kirp, 2003, p. 115), an acronym whose “R” displays an interesting slippage between “*revenue* center management” and “*responsibility* center management.” Performance technologies employ a discourse of consumer rights that calls on the responsibility of individuals and institutions to serve the public. They engage a discourse of security, or protecting institutions and individuals against risk by presenting themselves as “customer-focused, goal-directed, accountable to taxpayers, governments and shareholders, and transparent to technologies of performance” (p. 206). The faculty member, the academic unit, and the institution become enmeshed in technologies that monitor and measure performance for the “common good.” These technologies constitute forms of power that work on the individual and the collective.

DISCIPLINARY FREEDOM

Government seeks to meet its ends through an exercise of power that Foucault (1982) has described as “both an individualizing and a totalizing form of power” (p. 213). In other words, it concerns itself both with individuals and collectives, particularly in terms of their utility and governability. Power depends on free subjects “who are faced with a field of possibilities in which several ways of behaving, several reactions and diverse compartments may be realized” (p. 221). Power, then, is inherently relational, “a mode of action which does not act directly and immediately on others. Instead, it acts upon their actions” (Foucault, 1982, p. 220). In his studies of power, Foucault (1982) described three modes of objectification: (1) modes of inquiry that give themselves the status of science, (2) dividing practices, and (3) the self turning itself into a subject. The first refers to the study of humans that would produce a “truth” of what it means to be human. The second, dividing practices, refers to the creation of divisions, such as of the mad from the sane, the sick from the healthy, the homosexual from the heterosexual, the criminal from the good citizen, or the productive from the unproductive faculty member. These dividing practices produce humans as specific “types” and make possible the construction of means to assess, monitor, and cure them. The third mode, which I discuss in the next section, relates to the “truths” of science and dividing practices but shifts attention to how human beings recognize and craft themselves as subjects.

Disciplinary technologies of government, which are designed to create useful subjects, individualize actors through hierarchical and lateral observation, surveillance, normalizing judgment, and the exam (Foucault, 1977). Because they have been written about extensively (see, for example, Rabinow, 1984), I do not dwell in detail on their workings. However, it is important to keep in mind how the hierarchical ranking of individuals in relation to a norm and in relation to each other becomes an effective method for naturalizing behaviors and guiding the activities of “free” subjects. Annual evaluations, promotion and tenure, and post-tenure review are but a few of the formalized processes by which faculty members are subjected to surveillance and related to the whole through norms. What Foucault (1977) called the “introduc[tion] of individuality into the field of documentation . . . leaves behind it a whole meticulous archive constituted in terms of bodies and days. The examination that places individuals in a field of surveillance also situates them in a whole mass of documents that captures and fixes them” (p. 189). By “mak[ing] each individual a ‘case’” (p. 191), disciplinary technologies of evaluations

and tenure constitute each faculty member as an object for knowledge: “it is the individual as he may be described, judged, measured, compared with others, in his very individuality, and it is also the individual who has to be trained or corrected, classified, normalized, excluded, etc.” (p. 191). As faculty members document and explicate their every move, reviewing the self and anticipating others’ review of the self, knowledges are created that guide them to certain forms of action.

Evaluation and tenure function as disciplinary mechanisms of government not only by naturalizing the norms that rank individuals but also by producing loyalty to the institution. Wiegman (1997) offers an analysis resonant with Shumar’s claim that longstanding ideas of meritocracy individualize faculty members and foreclose inquiry into the workings of academic competition. Her emphasis on affect, as subjects are bound to or rejected by the institution, recalls the intertwining of material and psychic rewards. She describes tenure as

a lengthy and cunning seduction, one through which we learn to read the “work” that is extracted and required of us as the measure of both our personal and individual self-worth. This process, which is central to the production of intellectuals as bourgeois subjects, usually seems fine as long as the institution supports us. When it doesn’t, individuals tend to abject themselves as the institution’s excess. In these and other ways, the institution’s disciplining codes discipline our affect to stunted, standardized modalities, thereby condemning political rage to the individual level (“I wasn’t good enough”) where it can be dismissed (as sour grapes or a refusal to “fit in”). (p. 4)

But tenure does more than draw on faculty members’ affect in calling for them to craft the self in relation to norms. Rosovsky (1990) points out that while daily peer and student evaluations “induce discipline” (p. 187) to teach and conduct research well, more important for sustaining institutional allegiance and hard work is “*tenure as a source of internal discipline*” (p. 181). Despite its costs and its risks, he says, “without long-term obligations, our sense of internal discipline would be much weaker” (p. 182). This shift of government from the institution to the self must appear to be internally motivated and democratically practiced (see Rosovsky, 1990, p. 187). In other words, it relies on freedom.

Yet governmentality is more complicated than a view that leaves self-governing faculty members caught in webs of power. As Dean (1999) comments, “Regimes of government do not *determine* subjectivity. They



elicit, promote, facilitate, foster and attribute various capacities, qualities and statuses to particular agents. They are successful to the extent that these agents come to experience themselves through such capacities” (p. 32). These qualities and statuses are elicited and developed in relations of power that align individual faculty members with the collective good and produce their particular sense of self as successful and productive. But since these relations presuppose subjects’ capacities as agents, or their freedom to act (Foucault, 1988, p. 12), power must be understood as productive rather than repressive. In other words, because subjects may exercise their freedom by acting otherwise, relations of power always include “the possibility of resistance, for if there were no possibility of resistance, . . . there would be no relations of power” (p. 12). This means that there are always practical possibilities. As Bratich (2003) points out, capacities, such as the academic expertise that legitimates shared governance,<sup>8</sup> “can never be fully domesticated by the technologies that require them in governing through freedom” (p. 77). This is the paradox of a power that relies on freedom in order to govern.

Foucault’s later work shifted from seemingly constraining theories of the subject to elements of governmentality that involve the subject’s “practices of freedom” in crafting relations to self and others. Rabinow (1984) refers to this as subjectification (the third mode I mentioned above), or “processes of self-formation in which the subject is active” (p. 11). Foucault (1988) explained that even as “the subject constitutes himself in an active fashion, by the practices of the self, these practices are nevertheless not something the individual invents by himself. They are patterns that he finds in his culture and which are proposed, suggested and imposed on him by his culture, his society and his social group” (p. 11). Governance of the self does not suggest limitless agency, but the potential for creativity and changing relations of power.

#### IDENTITIES AND AFFILIATIONS

A turn to the dynamics of practices of the self, or how the subject constitutes itself through practices, is consonant with Foucault’s (1988) rejection of the idea of identity as fixed and fixable. He said of the subject:

It is not a substance; it is a form and this form is not above all or

<sup>8</sup> Shared governance is based on the idea that academic freedom depends on a system in which faculty expertise guides decisions affecting academic matters (see Gerber, 2001, p. 23; Morphew, 1999, p. 72).

always identical to itself. You do not have towards yourself the same kind of relationships when you constitute yourself as a political subject who goes and votes or speaks up in a meeting, and when you try to fulfill your desires in a sexual relationship. There are no doubt some relationships and some interferences between these different kinds of subject but we are not in the presence of the same kind of subject. In each case, we play, we establish with one's self some different form of relationship. (p. 10)

This multiple positioning — he invokes politics and sex, whereas I point to faculty positions as governor and governed — acknowledges a fluidity in practices of the self. What does the crafting of academic subjectivity through practice mean for actions in different but related spheres? In what ways are faculty practices continuous and in what ways discontinuous as faculty understand themselves as teachers, researchers, community members, and participants in governance?

A number of writers have turned to the idea of affiliations to understand processes by which academics come to understand self, other, and institutional relations. Defined as “relationships that confer value and identity on individuals, disciplines, and institutions” (Di Leo, 2003, p. 1), affiliations can have multiple effects, creating possibilities for action or “powerful constraints defining what actions seem possible; it constructs and reinforces certain identities while casting out other identities as implausible or obscene” (Nelson, 2003, p. 209). Affiliations based on institutional prestige or disciplinary position place academics in hierarchical relations (Shumway, 2003; Watt, 2003) and encourage submission by rewarding compliance (Nelson, 2003, p. 209). As real and imagined positions, affiliations can render opaque the ways academics are subjected to and subject themselves to a hierarchical, corporate structure (Davis, 2003, p. 182). Similar to Shumar's concern with what ideas of the “community of scholars” obscure and Wiegman's thinking about the illusions of democratic choice, Bérubé (2003) says of affiliations:

The discourse wherein professors speak of themselves as loosely, temporarily, voluntarily associated with one university or another is a discourse in which it appears to be next to impossible for professors to think of themselves as workers, let alone workers who *work for* someone. . . . It seems too servile, too abject to think that one might be working for, or even simply *at*, the University of Excellence . . . ; surely, we think, such terms do not capture the nature of the special and almost familial relation that obtains between faculty members and the universities with which they are affiliated. (p. 39)

Another view of affiliations suggests that they need not be hierarchical, but can lead to alliances across unpredictable locations (Davis, 2003). As individuals engage in multiple affiliations, they craft fluid identifications rather than permanent, unchanging identities. Given the tenuous nature of identity, multiple affiliations can be productive of new ways of thinking for individual subjects and collectives. Indeed, Cary Nelson (2003) argues that change can occur

when multiple affiliations are in tension with one another. Out of those tensions — erupting across subject positions in dialogue and in conflict with one another — can evolve alliances that link affiliated subjects in new ways. And the social space occupied by multiple persons taken up in different affiliations in turn promotes moments of recognition and self-critique ordinarily suppressed by affiliations that merely reinforce one another. (p. 210)

Returning to Foucault's idea of "practices of the self," in which subjects draw from cultures and social groups in inventing and governing the self, it may be helpful to ask what possibilities for freedom the "multiply affiliated" academic subject might have. To think of multiple affiliations is to raise an idea of the decentering of subjects, universities, and even community itself.

#### DECENTERING SELF AND INSTITUTION

Faculty members' multiple roles as teachers, researchers, colleagues, and participants in governance inherently suggest a number of affiliations, all of which shift in meaning as academic neoliberalism intensifies. In further considering the formation of academic subjectivity, I follow Foucault and poststructuralism generally in using the construct of the "subject" (rather than the "individual") to highlight that the subject is simultaneously subject — actor and agent — and object, or one who is acted on (Weedon, 1997). Subjects are constructed through discourse or ideology, which constrains but does not fully determine possibilities for thought and action. Because there are always contradictory discourses, even with the encroachment of corporatization, the formation of academic subjectivity is equivocal. That is, there is always the possibility that actors will take up positions that solidify existing power relations or that contest them.

To understand subjects as constructed in discourse is to understand faculty as decentered subjects, which means that they can not be understood in terms of a fixed identity. In modernity, human beings have been

defined in terms of a center such as identity, consciousness, or reason. And this center is thought to define the structure and essence of a subject. Similarly, modernity has defined universities in terms of a center, based on purposes of culture-building or cultivating reason that unify the activities and members of an institution. To suggest that neither faculty nor institutions have such essences is to understand them as decentered, defined and constituted by multiple and sometimes conflicting social, political, and economic forces.

Much has been written about the decentering of the subject in postmodernity. Common to these writings is an idea that subjects are not self-identical, coherent, fully rational, or continuous across contexts. Rather, the subject is constituted or created through language, ideology, relations, and contexts. In other words, the subject is not a unitary self with a preexisting identity who then encounters others and the world, but takes on identities through relations of difference (and which differences make a difference in constituting identities is based on ideology). Gergen (1991) has written of romantic, modernist, and postmodern conceptualizations of the self, pointing out that these conceptualizations do not represent a distinct linear narrative but that each continues to circulate. Romantic ideas of the self, which reached a zenith in the nineteenth century, focused on not easily observable capacities of moral feeling, loyalty, joy, and passion of an “inner” self, giving rise to ideas of heroes, genius, and inspiration. Modernist ideas of the self focus on the observable, defining the subject in terms of the capacity to reason: “Modernist discourse on the self also supported a belief in identity and coherence. People were knowable, understandable, and predictable . . . Stabilized identities contributed to a soundly structured society, and a structured society in turn supported a stabilized identity” (p. 174). Each of these ideas supports certain views of faculty. Romantic ideas portray the intellectual passionately committed to inquiry, institution, or community, working for a good beyond him- or herself. And the modernist self, a “separate individual possessing the capacity for self-direction and responsibility” (p. 8), promises to act as a rational, autonomous community member with “‘powers of independent judgment,’ ‘political opinions,’ and ‘desires for social good’” (p. 5) that enable him or her to exercise intelligently the rights and responsibilities of governance.

But Gergen (1991) points out that the postmodern epoch of multiplying relationships, the compression of time and space, and the rise of the image creates “a multiplicity of incoherent and unrelated languages of the self” (p. 6), rendering questionable the idea of a singular, authentic, centered self. As selves live, work, and interact in multiple communities,

they are constituted by multiple standards and criteria with which to evaluate situations. Relationality and multiplicity replace singular self-identity as a marker of the subject and call into question ideas of individual rationality or decision-making. Gergen depicts this “saturated self” as less coherent or unified than constituted by “manifold and competing potentials” (p. 80). In other words, multiple affiliations and positions in relation to others and institutions constitute the faculty member as living out multiple identifications. Moreover, despite corporatization’s insidious encroachment on university practices, corporatization is not the only discourse at work, as suggested by competing ideas I have mentioned, such as idealist notions of community, the conflicts of scientists committed to “traditional” science, and essentialist beliefs that faculty resist commercialization. In this sense, not only is the faculty member a decentered subject, but the faculty member dwells in universities that themselves are decentered spaces.

In *The University in Ruins*, Bill Readings (1996) offers a useful conceptualization of the decentering of universities. He argues that the “University becomes modern when all its activities are organized in view of a single regulatory idea,” (p. 14). In developing his view of “centered” institutions, Readings traces the gradual displacement of Kant’s University of Reason by Humboldt’s University of Culture, both of which revealed (and aligned) the identities of subjects and the state as they cultivated liberal, reasoning subjects. The Kantian University of Reason developed autonomous, reasoning subjects and rational communities, whereas the Humboldtian University of Culture cultivated a unified national culture in order to merge the development of the individual and the nation-state. But with the decline of the nation-state as the principal unit of economic production and the lessening importance of culture to the global economy (as well as increasing acknowledgment of the impossibility of a unified culture), culture and reason have become contested centers. In this context has risen the University of Excellence, a corporate bureaucracy that does not center culture or reason but centers “performativity [efficiency] in an expanded market” (p. 38).<sup>9</sup> In the University of Excellence, “students are consumers rather than

<sup>9</sup> Although Readings argues that the university’s ties to the nation-state no longer hold, that under Excellence “The University thus shifts from being an ideological apparatus of the nation-state to being a relatively independent bureaucratic system” (p. 14), I argue that ideology is very much at stake. While what has traditionally constituted an ideology, such as the inculcation of particular view of national culture, is not at stake, the University of Excellence promotes neoliberal ideologies of privatization and consumerization in the form and content of university work.

national subjects" (p. 53) and pedagogy and research become part of the apparatus of transnational exchange. However, Readings does not construct a sequential narrative of Reason-Culture-Excellence, just as ideas of the subject outlined above do not form a neat chronology. Rather, "the University is made up of divergent and non-contemporaneous discourses, even if one discourse dominates over the others at certain moments" (p. 14). In other words, historic "centers" of the university continue to inhabit the present as ruins "willed to us by a history whose temporality we no longer inhabit" (p. 19). Culture and reason have both functioned in dual roles: (1) as defining elements of the subjects who comprise the "community of scholars" constituted by rational deliberation and a distinct culture, and (2) as the basis of universities' purposes in the creation and dissemination of knowledge. The "community of scholars" and the purposes of universities, then, have been defined by the same premises. Corporatization seeks to insert itself into each domain, redefining the community of scholars as efficient and responsive (or bypassing it altogether) and recasting research and teaching in utilitarian, economic terms. Yet its entry into these arenas is neither complete nor unaffected by other ideas.

Conceptualizations of decentered institutions and of faculty as decentered subjects, both constituted by multiple discourses and affiliations, offer an understanding of potential for transformation, even with the rise of neoliberal ideas and practices and nostalgia for "traditional" ideas. Meetings and reworkings of ideas can create conflict for faculty members, not only among them but within a single faculty member, as they govern themselves and others. For example, without centered subjects or centered institutions, Readings argues that "the loss of the University's cultural function opens up a space in which it is possible to think the notion of community otherwise, without recourse to notions of unity, consensus, and communication" (p. 20). Rather than functioning as a model of the public sphere or the ideal society, universities can become locations where individuals and collectives must reimagine what it means to be together, even as corporatization seeks to shape this reimagining.

#### DISSENSUAL COMMUNITY

A reworked idea of community, and thus of governance, is consonant with Jean-François Lyotard's (1984) critique of metanarratives, such as speculative philosophy or narratives of emancipation, that legitimate

actions, the production of knowledge, social organization, and institutions. Lyotard (1984) critiqued ideas that society formed a unitary whole, whether Parsons' self-regulating functional system or Marx's divided whole composed of a dialectical relation between two opposing classes (p. 11). The metanarratives on which these ideas of society are based presume that a whole unites constituent parts and the relation of these parts can be just or unjust. In terms of governance, these metanarratives dictate and legitimate understandings of universities as communities based on a common good and consensus or on conflict between groups. Yet Lyotard suggests that neither a social bond of consensus nor of conflict is desirable, as they both perpetuate stasis. When conflict appears to promise change and "lead[s] to belief in an alternative, even then what is actually taking place is only an internal readjustment, and its result can be no more than an increase in the system's 'viability'" (p. 12). More importantly, with the decline of single legitimating metanarratives, universal consensus is not only impossible, but a faulty assumption of a goal: "consensus is only a particular state of discussion, not its end. Its end, on the contrary, is paralogy" (pp. 65–66). Consensus is impossible due to the temporary and temporal nature of social interaction, which is "supplanting permanent institutions" (p. 66).

Lyotard (1984) is emphatic that the breaking up of grand narratives does not foretell "the dissolution of the social bond" (p. 15), which need not depend on an organic whole. Rather, it refers to networks, in which "each [self] exists in a fabric of relations that is now more complex and mobile than ever before" (p. 15). In other words, subjects are positioned as singular points within multiple circuits of communication. What Lyotard envisions is a community based not on consensus but "the dissolution of the self into a host of networks and relations, of contradictory codes and interfering messages" (Jameson, 1984, pp. xviii–xix). This view of networks, or affiliations, rather than organic communities can be understood in one of two ways. "Flexibility" and impermanence could simply play into the efficient neoliberal construction of a contingent workforce of entrepreneurial selves. Or it could encourage the development of paralogy, or new forms of thought, both in the workings of communities and in the production of knowledge. Lyotard distinguishes paralogy from innovation. Paralogy "defers consensus" (p. 61). and "disturb[s] the order of 'reason'" (p. 61) by introducing into a language game new rules for thought, whereas innovation merely improves the efficiency of a given system. Thus, rather than consensus, Lyotard advocates for communities and for knowledge a search for "'instabilities,' as a practice of *paralogism*, in which the point is not to reach agreement

but to undermine from within the very framework in which the previous 'normal science' has been conducted" (Jameson, 1984, p. xix). The dominant rules attempt to define possible means of argumentation and validation, thus precluding otherness. Yet instability, impermanence, and decentered narratives open a space of the possible. Lyotard's thinking about rules is reminiscent of Foucault's idea of government, which would define possible ways of thinking and acting and render others unthinkable and undoable. But it also resonates with subjects' intrinsic freedom in subjection and the perpetual possibility that subjects might act otherwise.

#### IN DEFENSE OF ... ?

Writers concerned with the "crisis" of shared governance frame their concerns in the context of attacks on the structure of governance by neoliberal and managerial ideologies, as well as related issues of the socialization of faculty away from service (e.g., Burgan, 1998). While the structure of shared governance should certainly not be ceded, of larger concern to me, and part of the criteria for determining its very defensibility is its form and content. My approach to responding to these issues is to inquire into the "practices of the self" faculty engage in as they practice governance, particularly in a moment in which the self-evidence of neoliberal thought and practice guides administrators and faculty alike to govern themselves according to its logic.

In a report of case studies of campus senates, Lee (1991) commented, "Because a campus senate must deal with a multitude of agendas and because of its substantial symbolic role, it may be insufficient to try to study these bodies with tools of rational analysis. . . . there is more happening than can be understood or appreciated" (p. 61). And Hardy (1990) suggested that the interplay of politics and collegiality at work in governance "place[s] a considerable burden on the researcher. It is no longer appropriate simply to observe behavior; now researchers will have to try and uncover the motivation behind the actions" (p. 416). I have chosen in this essay to contextualize faculty governance within broad ideological shifts. I could have chosen to consider literature on stages of career development, culture, cognition, disciplinary and institutional socialization, or even psychoanalytic writings on pleasure and identification. Whatever I had chosen, I am certain there is more at work than I or others can account for within given frameworks.

What this essay takes into account are shifting ideas about the



university and faculty work, how those shifts relate to changing practices and relations within universities, and how those material practices affect faculty members' subjectivities as faculty members and participants in governance. The backdrop I have offered of the stratification of faculty members and their simultaneous subjection to economic imperatives in a context of crisis and to discourses of community and the common good offer a means of understanding the government and self-government of faculty. Discourses that assert the rights of faculty or the goodness of communities often ignore cultural politics and diffuse disciplinary, pastoral, and governmental apparatuses that reshape subjects and communities as they are increasingly called to align themselves with corporatization. My analysis is intended to suggest that even as the market exerts powerful influence on faculty, there continue to be a plurality of spaces in and ideas about the university, some competing and contradictory, that suggest the potential for fluidity in faculty subjectivity and practice. While market ideologies are manufactured as logical, necessary, and commonsensical, their hegemony is not complete. Nor would simply pointing to hegemony enable an understanding of how actors position themselves in relation to dominant discourses.

As those concerned with the present and future of governance seek to defend or reform its structures and processes, they must do so with attention not only to the multiplying managerial machinery that defines institutional life but with attention to the thought and practice of those who are governed and govern. In other words, as researchers, faculty members, and organizations seek to defend shared governance, it is incumbent on them not simply to react to "challenges" from the "environment" to the structure and functions of governance, but to account for and respond to the ideological and material forces that create governance as a "problem."

What does this mean in practice? It means that researchers and faculty members alike must remember that universities and faculty are constituted by multiple discourses and ideas, which compete, intersect, contradict, and reinforce each other at different times and in different ways. At this historical juncture, it seems impossible and naïve to imagine the de-corporatization of public research universities, or even that a critical mass of university members would advocate a rejection of market practices. It is impossible to assume that faculty will resist corporatization or that they will succumb to it wholesale. Likewise, it is impossible to assume that they will or will not participate in different levels of shared governance. It is also difficult to imagine that reliance on traditional defenses of shared governance, such as talk of collegiality, community,

and the common good, will challenge corporatization's hold, for neoliberalism is able to use these terms as its own. Rather, if the terms of the market are to be challenged or reworked, they must be confronted as they are. Research might ask how faculty members live out the discourses and practices that circulate within corporatization, as they resist and challenge, acquiesce and conform, create and transform.

Studies such as Rhoades and Slaughter's (1991) examination of the myths, or systems of belief, faculty members and administrators drew on in negotiating an intellectual property policy offers a beginning point for examination of how discourses shape beliefs and behaviors and how they are put to differing uses in practice. While their study focused on formal committee processes, a useful compliment would entail study of multiple aspects of the institutional and informal lives and work of participants. An understanding of faculty members' government of the self must take into account the local and the global, how individuals live out multiple discourses in their informal and formal relations at the level of departmental and extra-departmental affiliations, college and university committees, and relations to their own research and teaching. Such research would entail institutional and individual analyses of dominant logics and local forms of consent, contestation, and deliberation. Are there ways in which faculty introduce paralogy into deliberations of policy or into everyday practice? Can they do so without becoming incomprehensible according to dominant logic? At the level of creativity and transformation, perhaps most hopeful are those faculty members who, for academic and institutional reasons or due to their own interests, engage in multiple affiliations within and beyond their institutions. Their multiple positions may enable complex understandings of the workings of governmentality and neoliberalism, a questioning of its naturalization, and challenges to its hegemony.

Consideration of faculty members' subjection to multiple discourses within decentered and corporatizing institutions offers an opportunity to ask whether, and how, as Bok (2003) argues, "Of all the major constituencies in a university, faculty members are in the best position to appreciate academic values and insist on their observance" (p. 189). What exactly are academic values? How are they formed and re-formed? What and whom do they include and exclude, and how? Inquiry into values and their effects, how they act on actors, and how actors act on them can offer understandings of the limits and possibilities of faculty participation in shared governance in an ongoing moment of academic corporatization.

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## 10. COLLEGE ENVIRONMENTS AND CLIMATES: ASSESSMENTS AND THEIR THEORETICAL ASSUMPTIONS

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Attempts to systematically assess and compare college environments span over fifty years of research, starting with the work of Knapp and Greenbaum (1953) and Pace and Stern (1958). These early approaches used a variety of models, including measures referenced to criteria, such as a college's relative productivity in producing PhDs, and a fairly complex psychological conception of individual needs and presses, derived from the work of Henry Murray. As described earlier (Baird, 1988, 2000), these efforts flowed roughly into two streams: the first, which represented attempts to describe the environment in accurate terms, and the second, which was mainly concerned with examining college effects. The instruments developed in the first stream relied mainly on the perceptions of students (and in later measures other campus groups), and included the College and University Environment Scales (Pace, 1969), the College Characteristics Index (Pace and Stern, 1958), the Institutional Functioning Inventory (Peterson *et al.*, 1970), and the Institutional Goals Inventory (Peterson and Uhl, 1977). These instruments typically asked respondents to indicate the extent to which each item presented was an accurate description of their institution. Usually, the responses were aggregated by various methods and yielded a score for the institution, or in some cases subgroups. These scores were then compared with the results from other institutions, based on normative samples of institutions. One important result is that although the scales of the instruments differed in their original purpose, when factor analyzed, they yielded similar dimensions. These dimensions frequently included the friendliness or cohesiveness of the student

culture, warmth or quality of faculty-student relations, flexibility and freedom versus rigidity and control of academic and other programs, overall rigor of academic standards, emphasis on personal expression and creativity, emphasis on research versus concern for undergraduate learning, importance of fun and big-time sports, and sense of a shared identity or mission. Similar dimensions are reported in more recent studies. For example, although he combined factual and perceptual data, Astin (1993) reported the following clusters of environmental measures: Liberalism; Research vs. Student Orientation; Selectivity, Socioeconomic Status, Social Science; Community; and Emphasis on Science. The commonality and persistence of these dimensions of perception suggest that they provide a fairly robust description of the ways in which collective perceptions of college environments vary systematically across colleges.

The second stream, focusing on college effects, has tended to focus on more specific aspects of the environment that were expected to be related to particular criteria, such as students' intentions to complete their degrees at the institution, perceptions of a "chilly climate" for women, racial climate, and openness to diversity and challenge. In addition, the second stream has included various studies of the effects of the collective characteristics of students or human aggregate. These will be described in a few pages.

The purpose of this chapter is to a) make a case for the power of these assessments of environments to predict various criteria, b) describe the current status of these assessments, c) critique the measurement and theoretical quality of these assessments, and d) suggest some potentially fruitful directions for further work.

## THE PREDICTIVE POWER OF ASSESSMENTS OF ENVIRONMENTS

### PERCEPTUAL MEASURES

Do perceptions have any importance? That is, is there any evidence that they have any relationship to outcomes or criteria that higher education values? There is a good deal of evidence, although it is sometimes only available in manuals and reports. Pascarella and Terenzini (1993) summarize a variety of studies which indicate that the environment has "moderate" to "strong" effects on critical thinking, educational attainment, internal locus of control and career choice and career entered. However, their summary aggregates studies that use

different approaches to the environment, sometimes, but not always using perceptual data. Somewhat clearer evidence is provided by Astin (1993). Although Astin's measures of the environment are sometimes complex mixtures of variables, their influence on the multiple criteria he examined forms a fairly clear pattern. Using the common procedures of predicting criteria first by blocks of variables reflecting students' backgrounds and initial characteristics, then entering a block of "environmental" variables, and finally adding a block of "involvement" variables. (Astin describes these latter variables as "bridge measures . . . between input and environmental characteristics, in the sense that they can be considered both as characteristics of the entering student (input) and as attributes of the student's environmental experience" (p. 365). Thus, some of the variance attributed to "involvement" may be due to environmental features, and therefore the estimates of the effects of the environment may be underestimates. In my case, the environmental variables had the largest effects on the satisfaction measures based on senior data: satisfaction with faculty, quality of instruction, student life, general education requirements and facilities. Although "involvement" had the largest effects on satisfaction with the overall college experience (increase in multiple R of .18) environmental variables had a substantial effect nearly as large (increase of .15). In predicting what some consider the most basic outcome, attainment of the bachelors degree, the environment measures had a substantial influence, increasing the multiple R by .07, in comparison to the involvement measures which increased it by .19. Overall, these results suggest that the environment plays a substantial role in student satisfaction and attainment.

Additional evidence is provided by Pace (1984) and Kuh and Hu (2001). Pace (1984) reported analyses of data from the College Student Experiences Questionnaire, which includes items and scales attempting to assess students' experiences and "quality of effort" in a range of areas (use of library, interactions with faculty, involvement in clubs, etc.). The scales were generally 10 items long. The environment was assessed by eight single seven-point items covering the college's emphasis on the development of academic scholarly and intellectual qualities, emphasis on esthetic and creative qualities, emphasis on being critical and analytic, emphasis on vocational and occupational competence, emphasis on the personal and practical value of the courses, the friendliness of the students, the helpfulness of faculty, and the helpfulness of administrators. In addition, the CSEQ includes items asking students to rate the extent to which they believe they have gained or made progress toward 21 educational goals, such as "developing your own values and

ethical standard," writing clearly and effectively," "ability to think analytically and logically," and "understanding the nature of science and experimentation." A factor analysis of these gain ratings yielded five factors: personal/social development; intellectual skills; general education, literature and the arts; understanding science; and vocation. In multiple regression analyses, blocks of variables were entered in the following order: student background (age, sex, educational level of parents, racial or ethnic identification); status in college (year in school, residence, grades, major field, full or part-time status, time spent at a job, etc.); environment ratings; and quality of effort. After background and status, the environment ratings resulted in the largest increases in the multiple R in three of the five areas. In predicting gains in intellectual skills, the environment variables increased the multiple R by .11, whereas the quality of effort scales increased it by .09; these figures for general education outcomes were .11 and .07, and for vocational outcomes .14 and .05. In addition; in personal/social development, the environment variables increased the R by .10, whereas the quality of effort scales increased the R by .12; in understanding science, the same figures were .05 and .25. These analyses suggest that students' perceptions of the environment have a consistent relationship to their sense of progress toward important educational and personal outcomes. In addition, Pace had developed a two-item measure of students' satisfaction with college. Because previous research had shown satisfaction to vary by type of college, analyses were conducted by type of college (doctoral universities, public comprehensives, private comprehensives, selective liberal arts colleges and general liberal arts colleges. Environmental variables were the largest predictors of satisfaction in every type of college. This result, consistent with those of Astin (1993), suggests that perceptions of college environments are the largest predictors of student satisfaction.

Kuh and Hu (2001) conducted similar analyses using the CSEQ data from a random sample of 5,409 students from 126 colleges who had responded to the Third Edition of CSEQ. Kuh and Hu also factor analyzed the gain ratings and found five factors very similar to those reported by Pace: general education, intellectual skills, personal/social development, science and technology, and vocational preparation. They also used regression analyses to predict factor scores on the five factors. Again, after controlling for background and status, the sum of all the effort scales was the best predictor of four of the five factor scores; the environmental rating of "vocational and practical environment" was the best predictor of vocational preparation. However, all the environmental ratings were significant predictors of every gain factor. In predicting

satisfaction, all of the environmental ratings were better predictors than the sum of effort scales variable, again suggesting the importance of the environment for satisfaction.

In addition to these assessments of general outcomes, a series of studies using data from the National Study of Student Learning (NSSL) suggests the influence of perceptions of campus climate on various criteria that indicate their complexity. This longitudinal study gathered extensive survey and test data from a national sample of students attending 23 two and four year colleges. Some of these studies have examined variables that can probably only be assessed by measures of perceptions, and have often led to findings that provoke further questions. In one study, Whitt, Edison, Pascarella, Nora and Terenzini (1999) studied second and third-year follow-up data for women in the colleges. (The third-year data was available only for students attending four-year colleges.) After controlling for initial scores on cognitive data, background, status, and coursework taken, these researchers found that after two years perceptions of a chilly climate had no significant negative effect on tests of writing skills and scientific reasoning, but did have significant effects on self ratings of gains in the same areas.

In the study of third-year cognitive development, the perception of a chilly climate had a positive effect on a test of reading comprehension but not on a test of critical thinking, and negative effects of self ratings of gains in writing and thinking skills, understanding science, preparation for a career, and understanding the arts and humanities. The contradictory results of the test and the self-rating results led the researchers to consider the meaning, extent and varying consequences of "chilly climates." These studies are examples of the sometimes provocative results that only assessments of campus climate can provide.

In another study Cabrera, Nora, Terenzini, Pascarella and Hagedorn (1999) also used the NSSL first-year follow-up data. They examined the influence of a scale of perceptions of the campus racial climate — specifically of prejudice and discrimination — on social involvement, self-ratings of gains in cognitive skills, quality of interactions with faculty, grades, degree goal commitment, institutional commitment, and retention. For African-Americans, perceptions of prejudice had direct negative effects on quality of interactions with faculty, social involvement, and institutional commitment; perceptions of prejudice also had indirect effects on self-rated cognitive development, and retention. However, unexpected results with White students showed perceptions of prejudice to have direct negative effects on quality of interactions with faculty, degree goal commitment and institutional commitment,

and indirect negative effects on self-rated gains in cognitive skills, and retention. The authors consider this evidence that prejudice has negative influences on all students.

In another study using the third year follow-up data Whitt, Edison, Pascarella, Terenzini, and Nora (2001) studied the influences on students' "Openness to Diversity and Challenge," defined as readiness to meet and talk with people from different backgrounds and encountering different ideas from one's own. One institutional characteristic that was positively related to this outcome over all time periods was a measure of perception of a "Nondiscriminatory Racial Environment" reflecting fairness and inclusion of diverse views in coursework and programs. This finding suggests an important point, which will be discussed further later in the chapter: The greater and more specifically related the content of a perception is to a criterion, the stronger the influence.

In summary, there is a good deal of evidence that perceptions of campus climates are related to a wide range of outcomes, even after student backgrounds, educational status, and campus activities are taken into account. In addition, perceptual measures can illuminate important educational issues in unique ways. In short, perceptions of climate make a difference.

#### THE HUMAN AGGREGATE APPROACH

A different conception of the environment that has been supported in a number of studies is the "human aggregate" approach. This approach as Holland (1996) points out is derived from "... the suggestion made by Linton (1945) and others that most of our environment is transmitted through other people. This implies that the character of an environment reflects the nature of its members and that the dominant features of an environment reflect the typical characteristics of its members. If we know what kind of people make up a group, we can infer the climate that the group creates. For example, an office full of engineers would be expected to have a different atmosphere from that of an office full of accountants."

A stronger statement of the concept comes from Strange (1994) "Educational environments exert a conforming influence through the collective, dominant characteristics of those who inhabit them." Paraphrasing Holland, Strange goes on to note "The dynamics of human aggregates attract, satisfy, and retain individuals who are most similar in type to the dominant characteristics of those individuals comprising the

aggregate. In other words, artistic individuals are attracted to, satisfied within, and retained more readily by artistic human aggregates. Conversely, individuals who are dissimilar to the dominant type are more likely to be repelled by, dissatisfied within, and rejected by a particular aggregate. Consequently, since human aggregates are more attractive to individuals congruent with the existing dominant type, they reinforce and accentuate their own characteristics over time. Individuals within the aggregate, in turn, are encouraged and rewarded for exhibiting those dominant characteristics and are discouraged from exhibiting dissimilar or incongruent characteristics.” (p. 408)

Most of the work using the human aggregate approach has defined “dominant” by numerical or percentage of different categories of people. For example, Astin and Holland’s EAT (Environmental Assessment Technique) was based on the percentage of students majoring in the six Holland categories, along with size and average SAT score of each college. Some recent research using this approach by Smart, Feldman, and Ethington (2000) will be reviewed later.

Some compelling evidence for the human aggregate approach is provided by Astin (1993) who examined the input, environmental and involvement predictors of a wide range of outcomes in a large national, multi-institutional, longitudinal study. Students were followed from entry as freshmen to their senior year. After estimating the effects of student personal characteristics, institutional characteristics, curriculum, faculty, residence, financial aid, major academic involvement, and work, Astin concludes that measures of the average aggregate characteristics of the student body were the strongest predictors of most criteria:

“When it comes to the student’s affective development, one generalization seems clear: *students’ values, beliefs, and aspirations tend to change in the direction of the dominant values, beliefs, and aspirations of the peer group.*

Viewed as a whole, the many empirical findings from this study seem to warrant the following general conclusion: *the student’s peer group is the single most potent source of influence on growth and development during the undergraduate years.*” (p. 398)

Astin goes on to propose a “theory of peer group effects.” Although Astin’s evidence is too voluminous and sporadically reported to describe in detail, it adds great credence to the importance of understanding important aggregate characteristics. Some of the concepts which have been used to determine what is “important” will be discussed later.

**Figure 10.1:** Types of College Environmental Measures

INFORMATION DISTINGUISHING ...	PURPOSE	
	General Knowledge	Decision Making
among institutions in terms of characteristics	1	2
among institutions in terms of the people in them	3	4
within institutions in terms of characteristics	5	6
within institutions in terms of people in them	7	8

CURRENT MEASURES AND ASSESSMENTS OF ENVIRONMENTS

The evidence just reviewed showed perceptions of campus climates and the aggregate characteristics of students to be important. However, they are assessed in a great variety of ways and for a great variety of purposes. Perhaps the best way to understand this variety is to consider some distinctions among the purposes of such measures and assessments. One distinction involves the different concerns of researchers and users. Researchers are more concerned with obtaining valid general knowledge and are thus most concerned whether a measure accurately describes something the researcher is interested in. Users are more concerned with utility — how the information can help them make better decisions. A second distinction is one between information that is useful in describing differences among institutions and information that is useful in describing differences or characteristics *within* institutions. A third distinction is between characteristics of institutions and characteristics of the people in the institutions. Having laid out these distinctions, perhaps they can be made clearer by discussing the various possibilities and by referring to Figure 10.1. The cells of Figure 10.1 will be briefly introduced, followed by more extensive discussion of the assessments in each of them.

The cells of Figure 10.1 are numbered for the purposes of discussion. Historically, Cell 1 seems to have received the greatest attention from researchers. Pace and Astin, for example, have developed various ways of describing dimensions which validly distinguish between the



environments of institutions. Cell 2, in contrast, seems to have received relatively little attention; that is, little research has been devoted to a direct answer to the question "What information will help me make better decisions about institutions?" Indirectly, the work of a number of researchers concerned with the effects of environmental characteristics on students falls into this category, but only a small part of this work has been translated into practical information. This is not to say that researchers have been unconcerned about the utility of the measures they have developed; they have. But the concern for utility has usually played a subordinate role to the legitimate concern of obtaining valid information about higher education. The general question in Cell 2 is "What kinds of colleges do best with what kinds of people for what kinds of purposes?" An answer that could be readily used to match students and colleges has not been formulated although more studies of "conditional effects" (Pascarella and Terenzini, 1991) are appearing. An illustration of the difference between Cells 1 and 2 is in measures reflecting various aspects of "community." "Community" is an important variable distinguishing among colleges, but how a college or a student could use such information for concrete action may be unclear.

Cell 3 is concerned with who goes where to college (to study/or to teach). The *College Board Handbook* offers information about one important variable which distinguishes among students in different institutions — academic aptitude — and the ACT freshman class profiles include some other biographical data. Other studies have added information about attitudinal and personality test scores that distinguish among students attending different colleges. However, this research has not yet been completely integrated for the purposes of guiding individual decisions. Although Astin's (1965) book *Who Goes Where to College* was an attempt to provide information about colleges on the EAT variables, little use has been made of it. More recent research will be discussed shortly.

The information from Cell 3 has been applied to Cell 4 in only one area — ability testing and the prediction of grades. Systematic ways of guiding students into colleges that are appropriate in terms of the students' cognitive, attitudinal, and personality characteristics need to be improved. The more sophisticated college locator programs may be a useful start, and the biographical information form administered with the College Board and ACT exams are also useful. A data bank about who goes where and what happens to them would help the utility of these biographical forms.

Cell 5 presents a conceptual problem: how can we assess the quantitative validity of an environmental measure *within* institutions? It is entirely possible that many measures which validly assess important aspects of institutions' internal functioning would have little validity for distinguishing among institutions. For example, ratings of the quality of counseling services may have little relation to other aspects of the school, or may not vary systematically from one college to another.

The development of instruments for Cell 6 should be based on the practical concerns of users. That is, we need to find out what institutional researchers, students, administrators, and faculty would like to know about their own campus' facilities, policies, programs, and methods of operation.

It seems that the problem of Cell 7 is to identify the important kinds of groups on campuses and to find measures of their more important traits. Some assessments allow studies of the attitudes of students, faculty, and others, analyzed by field of study or teaching, and analyzed by characteristics of faculty members. However, it seems that information about the needs, goals, interests and sources of satisfaction of these various groups would also be valuable. In addition, it may be valuable to have more information about the characteristics of students from various backgrounds and of students who select certain living groups, enter specialized programs, etc.

The problem of Cell 7 carries over to Cell 8, but is more concerned with the task of developing the information that will help the individual and the institution make better decisions within the institution.

It seems apparent that no single instrument or type of instrument could serve all these functions. It is also apparent that certain functions have been neglected; most critically, it seems that considerably more attention has been devoted to gathering general knowledge than to developing measures of high utility. What is the current status of measures and assessments of college climates in each of the cells? What are their theoretical rationales, reliability, validity, and documented use in research and practice?

*Cell 1. Measures and Assessments Distinguishing among Institutions for the Purpose of General Knowledge*

After a period of great activity in the 1960s and 1970s (see Baird, 1988), the interest of researchers in developing such instruments for general use has waned. Although many of those instruments can still be

employed, few studies use them. Instead, measures of general college climate are often specifically tailored to the particular topic being researched, such as the studies using the NSSL. They have sufficient reliability for the research study, and mainly demonstrate their validity by reference to other information within the same studies rather than by independent sources of data. Currently, probably the most widely used assessments of college climates/environments are the single item estimates of the College Student Experiences Questionnaire and the National Study of Student Engagement. Although these single items show surprisingly strong relationships to students' sense of gain and satisfaction, the fact remains that a single item represents a very narrow attempt to capture the meaning of a domain of campus climate. However, in lieu of any other assessment of campus climate, they have proven to be serviceable, probably because the developer, C. Robert Pace, had devoted much of his career to assessing college environments, and the content and phrasing of the single items reflect decades of research and experience using more elaborate measures. However, this means that the main evidence for the validity of the items is based on their logical relationship to that other research not on evidence that they accurately assess the college environment, and the fact that colleges of different types have different scores on the items (e.g., selective liberal arts colleges are high on emphasis on scholarship, esthetics, critical, faculty relationships and administration; public comprehensives are low on the same scales; doctoral universities are low on esthetics, faculty relations, and administration). Despite these recent developments, there have been no major attempts to provide comprehensive assessments across college environments to match those of earlier decades. However, some theoretical approaches to be discussed in the final section of the chapter seem to provide potential frameworks for such assessments.

*Cell 2. Measures and Assessments Distinguishing among Institutions for the Purpose of Decision Making*

There are a wide variety of commercial and other assessments available (see Shenkle, Snyder, and Bauer, 1998, for a non evaluative listing of some of them). Many of them deal with students' evaluations of campus services, programs, environment and relationships. The chief use of comparisons with other institutions is simply to provide some perspective on the institution's own results. Very often, the most useful information is at the item level where the content focuses on details of

the institution's functioning. Since items are usually less reliable than scale scores, the results need to be used with caution, e.g., a difference of a few percentage points between the institution's results and the comparison groups may be of little practical importance, even if statistically significant. Some instruments only report data for item statistics.

To be of maximum use, the instruments' normative information should be disaggregated by type of institution. The most logical comparison group consists of colleges similar to the local institution. Similar colleges are likely to have similar problems, similar facilities, and similar ways of operating, and many colleges feel they are in competition with other colleges of the same type. However, most of the instruments available in this cell do not have sufficient numbers of institutions in any category of colleges to warrant separate comparative information; indeed, most have only limited use in a few institutions, and base their validity on analyses of individual respondents, rather than colleges, a fundamental ecological error.

One of the hopes for assessments of colleges in the early period of their development (see Baird, 1988) was that they could be used to guide students to appropriate institutions. However, the logical and logistical problems with implementing the systems of information that would be required have caused the projects to be abandoned. There are, of course, a myriad of college guidebooks purporting to provide descriptions and assessments of colleges for students choosing post-secondary institutions. However, these have been criticized for their inaccuracies and basing the descriptions on small, unrepresentative groups of reporters. Still, some studies have suggested that a few simple facts can provide a remarkable number of insights into an institution's climate, including average college admission test scores of freshmen (the higher, the greater the emphasis on scholarship), number of students (the larger, the lower the sense of community), and type of college (very different profiles for selective liberal arts colleges, strongly religious institutions, research universities, etc.). In a much ignored study, Creager and Astin (1968) found that common sense factual variables tapped the same dimensions as perceptual information. The degree of overlap in factual and perceptual variables is an area of research where much more could be done.

In sum, the degree of utility of the available assessments in this cell is uncertain, based on available reports. However, it is likely that many colleges have used the between college assessments for local studies, i.e., for within college purposes, and evaluated policies and practices with the information provided.

*Cell 3. Information Distinguishing among Institutions in Terms of the People in Them for the Purpose of General Knowledge*

As noted, the idea that the major features of environments are determined by the characteristics of the people in them has been termed the “human aggregate” approach (Strange and Banning, 2001). This concept has considerable intuitive appeal. Colleges where most students are engineering or science majors will have a very different climate than one where most students major in the arts. Colleges with open door admission policies and a wide range of academic ability among their students will seem different than colleges which are highly selective, with most students having excellent high school grades and test scores. There have been various attempts to describe colleges using information about the characteristics of their students, including Astin’s (1993) and Kuh, Hu and Vesper’s (2000) factor analyses of student data to create typologies of student subgroups, which will be discussed in greater detail when Cell 7 is described. Presumably, colleges with high proportions of, say, Scholars and Social Activists (to use Astin’s groups) would be quite different from colleges with high proportions of Hedonists, Status Strivers and Uncommitted students. However, these typologies have not been used very extensively in further research, nor have they been used in systematic efforts to assess overall campus climates. Finally, they are distinctly atheoretical. These will be discussed at greater length in Cell 7.

By far the most carefully developed set of concepts about human aggregates has been derived from the work of John Holland (1997). Holland contends that people can be categorized into one of six personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) based on their interests, abilities, and attitudes. Likewise, environments can be categorized into the same types based on the frequency of members of the environment in each of the personality categories. Thus, a college environment with a high percentage of Realistic students would be a Realistic environment.

According to Holland’s theory, each environment type emphasizes and reinforces behaviors, perceptions, attitudes, and values that are consistent with the dominant personality type. Holland (1997) describes these in some detail. However, Holland’s descriptions are chiefly logical extensions of his theory of personality types. As Gottfredson and Richards (1999) concluded, after examining the meaning and measurement of environments in Holland’s theory, most research has focused on individuals and their behaviors rather than the collective characteristics and effects of the environments. Thus, the validity of the environmental

descriptions has only scattered support in research. Perhaps most fundamental is the need for explanatory mechanisms that would show how the aggregate characteristics of a group of people are defined, reinforced, and maintained. Although there are several powerful theoretical concepts from the social psychology of small groups, the extent to which these could be transferred to such large collectivities as colleges is unclear. Further, the basic method for categorizing environments, the percentage of a group in each of the personality types has difficulties when applied to colleges, including variation within type and extent of contact. For example, the percentage of students enrolled in Business Administration and management, among others, has been used to define the Enterprising environment. However, these have become very popular majors in recent years, chosen as much for their “sensibility” or “practicality” as for real interest in business. Further, there is variation in institutions; will the management major at Williams be the same as that at Western Illinois? There is also variation in degree of contact with the environment and, thus, the opportunities for reinforcement. On some colleges commuting is common, at others almost all students live on campus. Many students work and have difficulties in participating in out-of-class interactions with other students and professors. Thus, while there is considerable evidence for the power of Holland Environments to influence students’ educational and vocational behaviors (e.g. Smart, Feldman, and Ethington, 2000; Feldman, Ethington, and Smart, 2001), further development of the theory would entail more analysis and study of the environment pre se. This recent evidence is discussed in Cell 7, and the potential value of the human aggregate approach is discussed under *Future Directions for Research and Assessment*.

*Cell 4. Information Distinguishing among Institutions in Terms of the People in Them for the Purpose of Decision Making*

The most common decision made between institutions is the choice of colleges (Hossler, Braxton, and Coopersmith, 1989; Hossler, Schmidt, and Vesper, 1999; Paulsen, 1990). Students considering colleges often consider such factors as the average SAT scores of current students, percentage of men and women, percentage of minority students, etc. In general, students and their parents seek colleges in which the student can be academically successful and socially satisfied. However, this information is weighed as part of an overall evaluation including considerations of location, cost, college type, programs, etc., and is not usually

provided or used in a systematic way. As noted earlier, probably the most thorough attempt to provide such systematic information was in Astin's (1985) publication, *Who Goes Where to College*, which reported standardized scores for most four-year colleges on the six Holland environments, plus standard scores for average test scores of the students and the "affluence" of the college. The idea was that students could compare their interests and abilities with the data reported and choose a college that was a "match." However, the book was not widely used and there has been no update or sequel.

Another type of decision made by some state agencies is the awarding of state funds to state colleges based on the "productivity" of the institutions and, thereby, the people in them (McPherson, 1996; Dundar and Lewis, 1995). These "performance measures" include very basic data, such as undergraduate enrollment and graduate enrollment and the average cost per student, the dollars in research funding obtained by faculty, and percentages of entering students who obtain degrees within a certain time frame (usually five or six years). Some states also use such information as the percentage of graduates employed, graduating students' evaluations of their educations, professional test scores, alumni accomplishments, and employers' ratings of graduates. These measures are far from the assessments of college climates reviewed earlier, but they are systematic information about outputs mainly in terms of people's characteristics, and they can play a large role in the high stakes decisions of state decision makers. They are often problematic indicators of institutional effectiveness because of the myriad other factors affecting them. For example, graduation rates vary directly with the selectivity of the institution; open door institutions are plainly at a disadvantage. Students prolong their educations for a variety of reasons, not the least of which is their ability to pay tuition; thus colleges that have large numbers of disadvantaged students will often report low graduation rates within a particular time frame. However, used judiciously, the performance measures can point to areas where improvements are needed, or where a college is doing an exceptional job. For example, if colleges enrolling minority students with about the same entering characteristics vary greatly in the graduation rates for such students, the results suggest that the programs and policies of the institution with a higher rate should be studied and perhaps followed. Still, despite the considerable literature on the use of performance measures, there has been little evaluation of their accuracy for depicting institutional functioning.

In sum, most measures in this cell have been used in an intuitive

ad hoc way when decisions are made. However, more systematic and research-based measures could increase the levels of understanding of institutional functioning and thereby the decisions made between institutions.

*Cell 5. Information Distinguishing within Institutions for the Purpose of General Knowledge*

There have been a number of assessments of the multiple environments within institutions using widely different conceptual schemes, including Biglan's typology of academic disciplines, Moos' ecological approach, and Salter's ideas derived from Jungian constructs. However, much of the evidence is based on the use of measures designed for between college studies within colleges, and on common-sense groupings of people. For example, a number of studies used the College and University Environment Scales to examine differences between majors, place of residence, and racial/ethnic groupings. These studies had only limited success, since the instrument was not designed for the purpose. Other instruments, notably the Institutional Goals Inventory (IGI) allowed comparisons among groups. In the case of the IGI, comparisons could be made between the responses of faculty, upper division students, graduate students, administrators, cabinet level administrators, trustees and community residents. Analyses of the University of California campuses showed that administrators generally had the most positive view of campus life, with community residents most negative. When asked about the goals they thought the institution should follow, there were some expectable differences. For example, students desired the least emphasis on research, cabinet level administrators the most; students desired the most freedom, community residents the least. However, the commonalities were perhaps more striking. The most commonly endorsed goals across all groups were "intellectual orientation" — emphasis on learning and development of intellectual abilities — and "community" — emphasizing interaction and mutual respect among students, faculty and administrators. Discussion of these goals could lead to coherent policies that would increase the institutions' effectiveness and clarity of purpose. However, the IGI and similar instruments have seldom been used to produce published research, although some anecdotal information suggests that they have been useful. In any case, they have fallen into disuse in recent years.

A fairly recent line of research has used constructs from Jung's



theory to assess personal environments (Salter, 2000, 2002, 2003). Salter attempted to match the assessment of the demands or presses of environments with those used on the Myers-Briggs Type Indicator. These were Extraversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judging-Perceiving. Each scale is a logical extension of the Myers-Briggs dimensions to the environment. For example, the Thinking-Feeling environments are described as follows:

*Thinking Environment*

Contains objective sets of logical operations that are based on a central, depersonalized truth or science. Although detached appraisal can often guide and advance the work of the thinking setting, competition, skepticism, and distrust might also be conspicuous.

*Feeling Environment*

Emphasizes connectiveness and stresses values and interpersonal interactions. Basic trust and warmth might be evidenced, although the setting could seem coercive and manipulative at a negative extreme. May be labeled as socially oriented, humanistic, or sentimental.

*Sample T-F Item*

7. The usual tone of this environment is  
(A) businesslike  
(B) friendly

Reliability estimates for the scales were E-I = .85; S-N = .80, T-F = .87, J-P = .70. In one study, Salter correlated these scales with those of the Work Environment Scale, based on the ideas of Moos (1981) applied to work settings. Some fairly plausible relationships were found. For example, the E-I scale was negatively correlated with a number of WES scales reflecting interactions with others (Involvement, Peer Cohesion, etc.), whereas the T-F scale was positively correlated with the same scales. Although the SETA is designed for all environments, Salter has recommended its use in higher education, and has reported an example in the study of the "chilly classroom." Salter (2003) asked a sample of students to choose a previous class where they perceived their "fit" with the classroom to be good, or one where it was poor. Students described the classes using the SETA instrument, and also completed the Myers-Briggs Type Indicator. Salter found that overall students classified as "Feelers" felt a good fit in classes classified as "Feeling" classrooms, and a poor fit in classes classified as "Thinking" classrooms. This study

suggests a more complex view of the idea of “chilly climates,” and more generally how environmental measures might be used to study person-environment interaction in conjunction with assessments of individual characteristics.

The model of Moos (1981) and the related University Residence Environment Scales have been discussed in Baird (1988) and Strange and Banning (2001). Although the Moos model is arguably the most comprehensive approach to person-environment interaction that has been applied to colleges, it has not been widely used in subsequent research studies, perhaps because of its comprehensiveness and complexity. The challenges of operationalizing its varied dimensions may have limited its use. However, at least one assessment effort has been based on Moos’ thinking, at least to some extent.

Denzine (1998) and Denzine and Kuwalski (2002) have developed an Assessment for Living and Learning Scale that measures students’ perceptions of the academic climate in their residence halls. Although still in development, the scale has been subject to a factor analysis that suggests two factors: one reflecting support for academic efforts from staff, the other reflecting the emphasis peers in the residence place on academic efforts.

Winston *et al.* (1997) used Weisbrod’s model of organizational diagnosis to develop Student Organization Environment Scales to measure students’ perceptions of the environment or climate of college student organizations. The dimensions studied were Rewards, or the visibility and status of the group on campus; Helpful Mechanisms, or supportive leadership and membership; Structure, or degree of planning and management; Leadership, or the balance, coordination and functioning of the organization; Purposes, or clarity of goals and commitment to them; Relationships, or social cohesiveness; Institutional Support, or college assistance; and External Support, or help from a parent/national organization (where applicable). Coefficient alphas ranged from .70 to .90 across three samples. Winston *et al.* compared the scores of a sorority nominated as “strong” with those of a sorority nominated as “weak.” Significant differences were found on five scales: Rewards, Relationships, Leadership, Institutional Support, and, most significantly, Purposes. In a sample of 255 students from 15 student organizations, Winston *et al.*, found that three scales correlated with students’ ratings of the importance of the organization to them personally, four to reports of time spent in organization committees, three with working independently for the organization, three with attending programs and social events, and six with attending general meetings. The Relationship scale was correlated

with all the variables, Rewards and Helpful Mechanisms with three, suggesting the importance of social cohesiveness and support. Analyses between and within organizational type demonstrated some plausible differences. Winston *et al.*, believe that the SOES could be used as a basis for discussion among student leaders who wish to improve their organizations, to evaluate interventions in organizations, and to identify positive intervention strategies. Although more research is needed with this instrument, it appears to have some potential.

As suggested by the studies reviewed, researchers have been quite active in this cell, developing and using assessments based on an interesting variety of theoretical viewpoints.

*Cell 6. Information Distinguishing within Institutions in Terms of Characteristics for the Purpose of Decision Making*

Many of the commercially available instruments designed to assess satisfaction with particular aspects of the college can be structured or include sections by program or subunit. For example, the responses of students in different majors at the ACT College Outcomes Survey could yield comparisons of the outcome and environmental satisfaction items.

In addition, a search of the ERIC system shows a large number of entries associated with "climate" that report about locally developed instruments designed to address a local issue. Usually there is no or little data on reliability or validity. Although there is a wide range of topics (e.g., the climate for women clerical staff at a particular community college, the climate of extension classes, etc.) there are some common topics reflecting the pervasiveness of some issues. Two common categories are assessments of the climate for minority students (usually specified as African American or Latino students), and the climate for women at all levels (students, faculty, staff). Assessments in both categories tend to concentrate on perceptions of prejudice, discrimination, fair treatment and harassment. They are often the work of a committee or task force assigned the responsibility of determining the extent of these perceptions as a follow up to continued complaints. The content of items often includes a mixture of general impressions and references specific to each campus. The reports based on the instruments often include descriptions of the actions that were recommended, and sometimes implemented to deal with the issue. What these locally developed assessments lose in comparative information, they gain in applicability of the results, relevance to local issues, and acceptability of results. Examining the degree

of success stated in these reports, it appears that the key to a good assessment is identifying the purpose of the assessment — determining the decision the college wishes to make, the problem it wishes to solve, or the question it wishes to answer. Another key is identifying relevant variables based on the outcomes the college seeks, its constituents' assumptions about the present situation, and consideration of unintended consequences. The assistance of faculty or staff with some expertise in survey development and administration is also helpful, as is an examination of the assessments made by similar institutions concerned with similar issues. In many institutions, it may be advisable to consider developing a local assessment rather than using a commercially available or research instrument. The high level of continued activity in this cell suggests that individual institutions see the relevance of climate and environment for their functioning.

*Cell 7. Assessments within Institutions in Terms of the People in Them for the Purpose of General Knowledge*

There have been a number of attempts to categorize students into subgroups based on their characteristics, rather than any evidence that they form groups in any sociological, cultural, or social psychological sense. That is, their operational definitions are based on students' similar answers to questionnaires or tests rather than evidence that they know each other, communicate with each other, share common values and aspirations, identify themselves as members of a group, and have common norms and definitions of group status. For example, the Clark and Trow (1966) "typology" was based simply on students' attitudes toward their colleges and toward the value of ideas, operationally defined as a forced choice between four paragraphs on the College Student Questionnaire. The assumption was that those who chose the same paragraphs formed a subgroup that shared many other characteristics. Thus, most subgroups are predetermined categories based on factual information about the students. With that caveat, is there evidence that these assessments based on categorizing students add to our understanding of student life and our predictions of students' behavior and outcomes? The oldest and simplest typology is the Clark-Trow typology just mentioned which yielded four "subgroups": "Academic" — high value on both ideas and loyalty to college; "Collegiate" — low on ideas, high on college; "Nonconforming" — high on ideas, low on college; and "Vocational" — low on both. Various studies of the validity of the

typology (e.g., Terenzini and Pascarella, 1976; Pascarella and Terenzini, 1977; Wilder *et al.*, 2000) suggest correlates with other instruments, but limited practical validity. Much of the research has examined correlates of the choice of the four paragraphs on the College Student Questionnaire, sometimes yielding interesting results, such as Wilder's studies of the changes in paragraphs chosen over time as a function of residential group. However, the prior nature of the typology begs the central question: Do these "types" reflect actual student subgroups?

A more substantive, if atheoretical, basis is to use data about students to form subgroups. Among the more successful of these is Astin's (1993) typology, based on a factor analysis of students' responses to a freshman survey. The variables used to create the categories included attitudes, behaviors, and goals, all self-reported. Based on a large multi-institutional national sample, these analyses resulted in seven groups: Scholars, Social Activists, Artists, Hedonists, Leaders, Status Strivers, and the Uncommitted. Scores were assigned to students based on their responses to scales based on the items identified in the factors. Evidence for their validity came from several analyses. These scores were related to career choices nine years after entering college in a logical pattern (e.g., students who became social workers scored highest on the social activist scale). In addition, the freshmen type scores predicted a variety of senior level criteria in consistent ways (e.g., freshman "scholar" scores correlated with senior college GPA, being in an honors program, the number of quantitative and science courses taken, and hours a week studying). All of this information gives credence to the validity and potential utility of the groupings. However, in Astin's study 40 percent of the students were "No Type," who did not stand out in any way in terms of goals or aspirations. However, they tended to be quite uninvolved in the life of their institutions. (They were distinct from the "uncommitted" in that the latter were thinking about changing majors, career choices, or colleges). This "No Type" presents a challenge to the idea of "sub groups" since they may represent the large group of students whose contact with the college and other students is minimal.

Another grouping, based on similar procedures, has been proposed by Kuh, Hu and Vesper (2000) who used statistical clustering techniques to group students on the basis of their responses to the College Student Experiences Questionnaire in a sample larger than 50,000 and from 128 colleges. Most of the items on the CSEQ deal with students' reports of the frequency with which they engaged in various activities (never, occasionally, often, very often). The activities covered most areas of the students' interaction with their college from experiences with faculty to

clubs and organizations. Thus, the groupings have the potential of being based on students' actual behavior, at least by self-report. Kuh found ten groups: Disengaged, Recreation, Socializer, Collegiate, Scientist, Individualist, Artist, Grind, Intellectuals, and Conventionals. The Disengaged was the largest group comprising of about one in five students. Each of these groups had a distinctive profile on the activity scales and reports of growth toward the educational goals described earlier. These profiles are plausible, but the evidence for their validity is concurrent rather than predictive. It should be noted that Astin and Kuh have not published subsequent articles on the groupings.

A more theoretically based approach, and one that has produced a series of studies is Holland's theory of persons and environments. Originally developed to assess and understand vocational choices, Holland proposes six categories of people, based largely on their vocational choices as an indicator of their personalities (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional), and corresponding environments, usually defined by the percentage of people in an environment sharing the same category of vocational choice. A number of studies have shown that when students' personal vocational choice matched the dominant choices of other students in their environment, they tend to retain their choice, and may possibly have higher satisfaction and persistence. (See Evans, Forney, and Guido-DiBrito, 1998 for a summary.) However, a series of studies (Smart, Feldman, and Ethington, 2000; Feldman, Smart, and Ethington, 1999, 2004; Feldman, Ethington, and Smart, 2001) provide considerable support for three of Holland's theoretical ideas: Self-selection by which students chose academic environments that match their personality types, socialization by which environments reinforce and reward different student characteristics and congruence by which students who are in matching environments increase their abilities, interests and sense of growth in theoretically related areas (e.g., "problem solving skills" for Investigative students). The researchers used existing data sets to form measures and test the three hypotheses: the 1989 Carnegie study of the Professorate and an HERI-UCLA longitudinal sample of students. The faculty sample was used to study differences in faculty in different environments. The student data was used to examine changes from the freshman to senior year. Although the secondary use of existing data sets collected for other purposes limits the extent to which the measures match Holland's theoretical constructs, it could be argued that the procedures provide a strong test of Holland's ideas. That is, if the propositions are supported, even using secondary data analyses in data not designed with the theory in

mind, then that may add evidence for their robustness. The analyses of the faculty data showed that faculty in the Investigative, Artistic, Social and Enterprising fields had different views of the importance of various teaching goals, curriculum, teaching, and students. The student analyses found mixed support (some strong, some weak) for the three propositions, when the measure of the environment was based on major field and outcomes included self rated interests and abilities relevant to each Holland category, as well as self-reports of growth in 17 areas. The authors examined the effects of a Holland major category on students with “congruent” and “incongruent” personalities, and compared “recruits.” The researcher’s careful attention to the meaning of these terms adds particular support to the socialization proposition that environments change people to fit their dominant emphases. This series of studies is very useful not just because it provides evidence for Holland’s system, but that it provides theoretical perspectives that are helpful and heuristic when considering the mechanisms by which environments affect people in general and could be applied to other approaches to the environment. Some ideas on this point will be offered in the section on future directions.

*Cell 8. Information Distinguishing Within Institutions in Terms of the People in Them for the Purposes of Decision Making*

As with Cell 6, many institutionally based investigations report attempts by institutions to understand the various categories of students and their needs. Many of these investigations, often conducted by institutional research offices, are based on implicit or “common sense” ideas about groups of students. For example, commuting students may be studied in terms of their course loads, major choices, academic performance and persistence. Similar data may be gathered for groupings based on ethnic/racial categories, students’ ages, participation in special programs and the like. Sometimes this data may lead to important questions. For example, a university might find that few African Americans enter their science or engineering programs. Women entering those same fields may change to other majors at a greater rate than men. Community college transfers may not be as academically successful at the four-year institution. All of these results should spark further efforts to determine the reasons for them, and these efforts may lead to programs or policies to deal with a perceived issue. For example, the science and engineering fields might provide programs for students and faculty designed to

increase the retention of women in those fields. Then evidence of improvements in retention rates, academic performance and graduation rates could be gathered to evaluate the programs.

The kind of information just described is not usually thought of as being in the environmental category. However, by describing the characteristics of groups of students considered important to a college, a college can examine its own assumptions about how their various students' constituencies interact with their colleges. Certainly different data can raise red flags in many areas. For example, if comparatively high percentages of students leave certain majors, those department as well as the institution should examine the environment of these majors. If the members of some fraternities are on probation at an unusually high rate, both the fraternities and the college should examine their environments. As these examples suggest, such factual information can suggest environmental interpretations.

Some of the national services, such as ACT, the College Board, and the ACE-UCLA freshman survey will provide breakdowns of data about incoming students or will provide a data file which the institution can use. In any case basic factual information about the people in a college environment can help to identify problem areas and illuminate decisions.

#### FUTURE DIRECTIONS FOR RESEARCH AND ASSESSMENT

Some very useful suggestions for further work lie in discussions of current theorists. For example, when Holland (1997) discussed his formulations of the six environments, he noted that individuals' levels of interaction with an environment may vary and, therefore, the extent to which the environment affects them will vary. Thus, assessing the time and nature of the interaction will be important. Secondly, where someone is located in the environment may determine the extent and character of their interactions with it. Thus, it is important to assess membership in special subunits of the environment, and determine which exert the most influence on the individual. Thirdly, Holland's concept of the "dominant" emphases of the environment are usually measured in terms of the numbers of people in the six categories. However, Holland notes that power is not always equivalent to numbers; people with great formal or informal power may control the tasks, rewards, and values of an environment. Thus, it is important to assess the power relationships in a group or organization. Fourthly, Holland also calls for assessing individuals' perceptions of the environment in



terms of its priority in their behavior. "The weak impact of many educational and work environments occurs because a person is attending more to friends, family, or colleagues who may be remote from his immediate physical environment" (Holland, 1997, p. 29). Many faculty, for example, are more oriented toward faculty in their specialty in other institutions than their immediate colleagues. Finally, Holland noted how the size and complexity of an environment may have influences that are independent of the distribution of types. All of these suggestions would require the development of new assessment variables, or at least the reinterpretation of existing measures such as organizational size. They also are suggestive of a variety of research studies.

Other potentially useful approaches come from re-examining the research on the effects of college environments which has been based on assumptions, not only of homogeneity in the educational process (Pascarella and Terenzini, 1998) but also of homogeneity in the interactions of students with those processes. The most dominant ideas have centered on the degree of student involvement, social integration, and academic integration. That is, as summarized by Braxton (2000), colleges bring about changes in students in proportion to their involvement with the social systems of the colleges they attend. However, as Tierney (2000) and Rendon, Jalomo and Nora (2000) have pointed out, this idea is often interpreted as the absorption of students into the dominant culture of the institution. Further, this dominant culture is usually a reflection of traditional, primarily White, upper- and middle-class values and perspectives. The diversity of students makes the conception problematical, and several researchers have proposed different models or conceptions that could lead to understanding the variety of ways in which students can interact with their institutions. These conceptions include a cultural perspective (Hurtado et al, 1999; Kuh and Love, 2000), a cultural capital perspective (Berger, 2000; Bourdieu, 1977), and institutional theory (Laden, Milem, and Crowson, 2000; Zucker, 1987).

Kuh and Love (2000) propose that the influence of colleges is "inversely related to the cultural distance between a student's culture(s) of origin and the cultures of immersion" (p. 204) — or college cultures. For some students the typical college's values, attitudes, beliefs and assumptions are familiar, for others they require considerable adjustment. In some cases this adjustment is difficult because the institution's cultures are reflected in a "hidden curriculum" (Margolis, 2001). For example, many classes assume independent work, grading (valuing) students at different levels for specific achievements, and inflexible deadlines. Kuh

and Love contend that finding an enclave, or group of supportive students, is important in developing a sense of belonging, which is necessary for successful adaptation. Such groups provide positive regard for the student as well as suggestions for coping strategies in dealing with the expectations of the institution. Often these groups are not the conventional ones; rather, they are composed of students and sometimes faculty with a cultural origin similar to the student's. Thus, one strategy for the development of more useful assessments is to determine the individual's assumptions about the academic and cultural expectations of their institutions, to determine the dominant expectations as seen by the majority of people in the environment, to contrast these expectations, and to relate the degree of discrepancy to student adaptation and success. It would also be important to assess membership in "enclaves" and the roles they play.

Rendon *et al.* (2000) also use a cultural perspective but place more emphasis on a critique of the assimilation or acculturation assumptions of some models of college impact. They challenge the assumption that students must adopt the culture of the institution in order to be successful. Instead, they discuss the concept of dual socialization in which it is not assumed that one culture is superior to the other. The work of "converging two worlds requires the use of cultural translators, mediators, and role models to (1) provide information and guidance that can help students decipher unfamiliar college customs and rituals, (2) mediate problems that arise from disjunctions between students' cultural traits and the prevailing campus culture, and (3) model behaviors that are amenable with the norms, values, and beliefs of the majority and minority cultures" (pp. 137–138).

In this process, support and encouragement from family and friends from the culture of origin is important. Research suggests that this support helps to "negate discriminatory experiences, enhance the social and academic integration of students, and positively affect students' commitments" (Rendon *et al.*, p. 140). In addition cultural translators, mediators, and role models are needed to negotiate the expectations of colleges. Finally, this approach emphasizes the role of the validation of students. This approach suggests the importance of assessing the multiple environments of students and their perceptions and uses of cultural translators and role models. The extent to which some students perceive the environment or particular individual as validating them may be especially important.

A second emerging view based on critiques of current impact research emphasizing the role of social reproduction and cultural capital

is presented by Berger (2000). Drawing on the analyses of Bourdieu (1971, 1977), a number of researchers have investigated the experiences that students from different socioeconomic classes bring to college and the effects of those experiences on their adaptation to college. For example, students who have always assumed they would go to college, received private music lessons, traveled broadly, attended a range of cultural events, and met prominent people come to college with very different perspectives from first-generation students who have needed to work to contribute to their families' incomes. These perspectives produce what Bourdieu terms a *habitus* or a "system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a *matrix of perceptions, appreciations, and actions*" (1971, p. 83). In other words, people who live similar lifestyles because of their common level of access to capital develop a shared worldview as a result of common experiences and interaction. This habitus fosters a common representation of the world in a class-specific manner at a cognitive, taken-for-granted level" (Berger, 2000, p. 99). People from similar class backgrounds share a common habitus, and interactions with others from the same class tend to reinforce it. Thus, interactions with the peer group as well as teachers are important in the process of accumulating cultural capital.

The other major conception is that institutions vary in the extent to which they serve the interests of students from different classes. Thus, attendance at elite universities is part of the habitus of upper-class students, and these institutions promote the idea that attendance at them promise greater individual success. As a consequence, institutions vary in the extent to which their students come from different classes. The peer cultures of the institutions reflect the differing habitus of the students who attend. Likewise, faculty may tend to interact with students with different levels of cultural capital differently.

Connecting these ideas, Berger (2000) proposes several propositions based on the match between the students' and the colleges' levels of cultural capital. Although students with higher levels of cultural capital are expected to be more successful across all institutions, they are especially likely to be successful at colleges with high levels of cultural capital, becoming integrated into the academic and social systems of the institution. Likewise, students with lower levels of cultural capital are expected to be more successful and integrated at institutions with low cultural capital. From this line of theory, it would be important to assess the levels of cultural capital among students and the expectations of faculty based on cultural capital assumptions. These assumptions may be made manifest in language, habits, and prior cultural knowledge and

experience. It is then important to assess individuals' levels of cultural capital, compare them with those that prevail at the institution, and relate this comparison to student performance.

The third area of new theorizing on college environments is in institutional theory (Berger and Milem, 2000). Although much work in this field has focused on change and stability in organizations in response to the environments with which they interact, Laden *et al.* (2000) have made provocative suggestions for how it can be applied to student outcomes. They note that institutions develop shared social realities, values, assumptions, and routine behaviors, and also note that institutions often have considerable discretion in the use of their resources. They suggest that researchers could learn a great deal by examining the colleges that are highly effective in affecting student outcomes, even when they might not be expected to, given their resources or prestige. In effect, the question is, "What would a college devoted to student success look like; what would its organization, budgets, curriculum, programs and habitual behaviors be?" An example of this kind of analysis is provided by Wolf-Wendel (2000) who studied five colleges with records of producing unusually high percentages of women graduates who went on to earn a doctorate or to be listed in *Who's Who*. The study found that the colleges had eight attributes: high academic expectations, a clear sense of mission and history, positive role models, a supportive and caring environment, leadership opportunities, opportunities to learn about oneself, a high-achieving peer culture, and student connection to their communities. Thus, this strategy would focus on assessing aspects of college environments that are conducive to student success and satisfaction. As with the Wolf-Wendel study, research might begin by examining the environments of highly effective colleges. Although there are some dangers in arguing from extreme cases, it is a place to start to understand the features of environments that are related to success.

These three newer approaches to understanding college environments use different theoretical ideas, but they share the common perspective of analyzing the process as involving varied students and varied institutions. They also are greatly enriched by the use of qualitative methods. Understanding this variability through a theoretical lens can help researchers find better ways to assess potentially important dimensions of college environments.

## CONCLUSION

In this chapter I have attempted to review evidence for the unique power of environmental variables to affect student outcomes, describe

the current efforts to use environmental assessments for research and practical purposes, critique those efforts, and suggest some new theoretical approaches that could lead to better assessments. The rich and extensive history of past attempts to understand and assess college environments leads me to believe that better assessments are possible, and that these assessments will provide better theoretical understandings of how our colleges affect the people in them and that those understandings will lead to better practice.

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## 11. FOR-PROFIT DEGREE-GRANTING COLLEGES: WHO ARE THESE GUYS AND WHAT DO THEY MEAN FOR STUDENTS, TRADITIONAL INSTITUTIONS, AND PUBLIC POLICY?

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By responding to student niche markets and employer needs for programs in technology and business, for-profit degree-granting colleges have grown into a relatively small but significant segment of the total population of U.S. degree-granting institutions.

They now constitute 19 percent of the degree-granting institutions located in the United States and award 5 percent of the degrees. The composition of degrees awarded by for-profit colleges in 2001–2002 was associate's 24 percent, 52 percent bachelor's degrees, 19 percent master's degrees, 2 percent doctoral degrees, and 3 percent first professional degrees (Knapp, Kelly, Whitmore, Wu and Gallego, 2003, p. 2). Some for-profit colleges have reputations for being cutting edge in their instructional methods and technological sophistication.

Until the late 1990's, traditional higher education paid little attention to for-profit colleges. An 1990 ASHE-ERIC monograph on the broader universe of all for-profit post-secondary institutions (Lee and Merisotis) drew little attention. Although addressing a broad variety of education providers, the Ted Marchese article "Not So Distant Competitors" (1998) attracted national attention and brought for-profit providers into a bright spotlight. Now for-profit degree-granting colleges attract major attention in higher education newspapers, notably the *Chronicle of Higher Education* which supplements its regular news coverage with a quarterly economic index of for-profit higher education ("The Chronicle Index of For-Profit Higher Education," February 13, 2004).

Much of what was written about these for-profit institutions prior to the late 1990's was either the simple advocacy by institutional representatives or abstract criticism. Now there is more basic description and more use of basic concepts of organizational, economic, and political studies. Although single institution case studies are more common than systematic comparisons of multiple cases, at least the single case studies are of the larger institutions. Overall, dispassionate analysis is contributing to a more balanced discussion about the strengths and weaknesses of for-profit colleges. The body of recent literature is sufficient to allow a good-sized annotated bibliography to be compiled (Lechuga, Tierney, and Hentschke, 2003). As scholarly research in this area is of recent origin and is positioned on the boundaries between the more established areas of higher education research and the social science disciplines, much of it is still in the form of conference papers not yet published. Scholars also find themselves relying very heavily on higher education newspapers and the general newspaper press because of fast moving developments.

At this point, we know a great deal about some aspects of for-profit institutions and a lot less about others. We know more about large multi-campus systems that are regionally accredited and a lot less about smaller institutions that are typically more locally oriented and not regionally accredited. A large multi-campus system and a small single campus institution each counts one when institutions are counted.

This chapter starts with historical background about the emergence of degree-granting postsecondary colleges as a distinct segment within the larger universe of postsecondary for-profit institutions. Second, background is provided about general categories of for-profit degree-granting colleges. Third, reasons why the for-profit sector arouses the curiosity of the not-for-profit sector — level of student appeal and different operating norms, especially regarding faculty practices — are noted. Some emerging patterns of program offerings are also noted. Fourth, attention is given to how for-profit colleges structure faculty practices and the academic culture in order to maximize educational and organizational effectiveness.

Fifth, the major elements of the public policy accountability framework for for-profit colleges — including state licensing, regional or national accreditation, and institutional federal financial aid eligibility for students — are examined. This examination includes differences in perspective between the for-profit and not-for-profit sectors on how this accountability framework is applied to the for-profit sector. One place these differences have been reflected is in 2003 and 2004 exchanges

over reauthorization of the Higher Education Act. Sixth, ways that public accountability expectations might evolve in the next decade are analyzed.

Seventh, some relatively complex issues posed for public two and four-year colleges by the operation of for-profit colleges and the more general marketization of higher education are examined. Finally, future directions for research on and practice in for-profit higher education institutions are identified.

### HISTORY AND RECENT EVOLUTION OF U.S. FOR-PROFIT COLLEGES

During the 1800's for-profit institutions provided most of the training in the industrial skills and trades, for occupations such as law, medicine, and accounting, and in the then new office technologies. In the early 1900's, progressive ideals of formal education in many professions and of education as a public trust, led to the establishment of inexpensive public postsecondary options. With the expansion of higher education after World War II, for-profit postsecondary education was not in position to compete with inexpensive and widely available public postsecondary options and, as a result, became somewhat marginalized in offering low-level training programs (Breneman, Pusser and Turner, in press; Kinser, in press). Robert Ruch's (2001, pp. 50–63) perspective is that for-profit higher education institutions have been necessary throughout U.S. history to provide the applied occupational education which has been neglected by traditional colleges.

In the late 1960's and the early 1970's, the position of for-profit postsecondary education became stronger for multiple reasons. The baby boom generation graduated from high school in large numbers and sought educational opportunities. The 1972 reauthorization of the Higher Education Act made students at for-profit colleges eligible for federal grant and loan financial aid providing essentially the same access as for students of public and private not-for-profit institutions.

For-profit degree-granting colleges have not totally shed the image that a portion of postsecondary institutions left during the 1970's and 1980's. For-profit training institutes with short certificate rather than degree programs and various correspondence schools mushroomed during that time, a period where there were few constraints on recruiting methods, by signing up many low income individuals in urban areas with use of federal grants and loans. Those practices led to a variety of

dissatisfactions resulting in mid-program dropout, student difficulty in finding employment, and high federal loan default rates (Breneman, Pusser, and Turner, in press). Loan default rates in the proprietary sector reached scandalous proportions by the late 1980's leading to many studies of the characteristics of defaulting individuals, the institutions they attended, and the rules of lending. The default rate was found to be inversely related to degree level of the for-profit college program. The default rate was lowest for students who had attended four-year institutions and the highest for individuals enrolled in a less than two-year non-degree program (Lee and Merisotis, 1990, pp. 46-58).

Stricter institutional eligibility standards for federal student financial aids were enacted in 1992 that included minimum program length, recruitment limitations and substantive admission standards as well as accreditation by a recognized accrediting body. This tightening of federal financial aid standards led to the establishment of sounder career colleges which then sought either regional or national accreditation. After this transition, most career colleges bore more similarity to traditional institutions adding elements of general education, and more student services including developmental education.

Beginning in the 1990's, new corporate organizational forms took root in for-profit higher education, with about a dozen higher education management companies establishing campuses throughout the U.S. and Canada based on either modular development or purchasing smaller independent schools. The largest of these are the Apollo group (over 150 campuses including the University of Phoenix campuses), Corinthian Colleges (81 campuses), Career Education Corporation (75 campuses), Education Management Corporation (65 campuses including Argosy University campuses), DeVry University (58 campuses), Kaplan Higher Education (47 campuses), Strayer Education (28 campuses), and Sylvan Learning Systems (26 campuses)(Kinser, in press).

## WHICH FOR-PROFIT COLLEGES COVERED

This chapter addresses for-profit colleges that offer at least an associate degree or higher degree. Within that universe those for-profit colleges that have either national or regional accreditation are the primary focus. This coverage is the most useful as accredited institutions that serve similar purposes to traditional colleges are of the greatest interest. The chapter does not address the circumstances of postsecondary institutions that award only certificates and other shorter units of instruction.

An Education Commission of the States publication used three categories: enterprise, supersystems and internet only. Enterprise institutions are usually locally/family owned and have a very informal structure and operating style. They generally have enrollments of less than five hundred per campus with total enrollments of less than three thousand. Career orientation is very strong with career courses preceding general education. Similar to the military, students take one course at a time with courses generally hands-on and with high time-on-task. These colleges frequently employ a large number of full-time faculty typically not requiring a graduate degree. They offer significant student support services and developmental education. By contrast, supersystems have larger campus enrollments. Faculty are more likely to have master's or doctoral degrees and to be employed on a part-time basis. There are few internet-only institutions and they have little in common with either enterprise colleges or supersystems. They have no buildings except for corporate offices, no full-time faculty and only virtual classrooms. Internet only institutions have students who are usually in their thirties and forties and additionally served a sizable international clientele (Education Commission of the States, 2001a).

#### WHY SUCCESSFUL, WHY CONTROVERSIAL, AND WHERE EMERGING

There is a high level of agreement among commentators on the for-profit sector as to why for-profit colleges have been successful in attracting a substantial number of students although tuition levels are significantly higher than those of public sector institutions. For-profit colleges offer degrees in high employer and student demand curricula, emphasize hands-on learning, have a customer service orientation, offer courses at convenient times, operate year round, emphasize career placement, and develop new degree programs in rapid response to demand. These institutions have very low unit costs of operation because of economies of scale, no frills but modern physical plants and equipment, and typically part-time faculty; they are profitable to owners and stockholders (Education Commission of the States, 2001a; Ruch, 2001).

Students like for-profit colleges because they respond to student desires for simple bureaucracy, expediency in educational delivery (convenience, schedule and calendars), an engaging curriculum and an emphasis on career launching. Many had tried a traditional institution and had failed, lost motivation, or become frustrated at how they were

treated. The appeal is to students interested in learning job skills without taking many courses in the liberal arts which these students consider irrelevant (Education Commission of the States, 2001a; Ruch, 2003). During the late 1990's the return on investment to the college student of completion of a bachelor's degree from a for-profit college was calculated by Wall Street financial analysts to be 28 percent compared to 18.6 percent for such completion in higher education more generally. That differential is related primarily to the high concentration of for-profit college graduates in computer, technical, and other career oriented fields (Ruch, 2001, pp. 80–81). As calculations have not been published for the period following the late 1990's, it is not known whether returns to the student for various types of higher education are smaller or larger under different economic conditions.

For-profit colleges have seen rising minority enrollment. For example the percentage of the total enrollment which is Black and Hispanic is 21.7 percent and 11.0 percent respectively at DeVry University and 12.0 percent and 15.0 percent at IIT Technical Institutes. The location of most for-profit campuses in major urban areas makes them especially attractive to the minority individuals of their home cities who for family, cultural, or job reasons prefer to stay in geographic place during higher education attendance (Farrell, 2003, May 30). A significant portion of urban minority students are low-income and first-generation college. The fact that these students suffer less from “sticker shock” than their socio-economic background might suggest has not been much explored.

The operating norms of for-profit colleges differ from those of traditional institutions in a number of ways. These include:

- Consistent with the hands-on nature of the curriculum, general education requirements tend to be relatively short. Some critics have labeled these occupationally oriented offerings as training rather than education (Altbach, 2001)
- Demonstrations of the quality of the educational experience focus directly on student outcomes with relatively small attention to inputs or process (Education Commission of the States, 2001a; Ruch 2001).
- Faculty work expectations and circumstances are significantly different than traditional practices. Faculty typically do neither research nor public service. Faculty are usually at-will employees and few institutions have a tenure system. An explicit principle of academic freedom exists at few institutions. The extent of

academic discretion which lies with the typical faculty member is relatively low (Education Commission of the States, 2001a; Ruch, 2001).

- Library resources are relatively small and may be entirely on-line.

The market potential for-profit college activity is largest where employer demand for either new entrants or continuing education is high or where public institutions have chosen not to serve or have significant limitations to the scope of their activity. For-profit colleges are already well established in technology and applied business areas. Areas more recently developed include the health sciences and teacher education. Expansion of on-line divisions is also likely. More specifically:

- Many for-profit colleges have entered the ten highest growth areas health sciences because of high employer demand after very careful examination of equipment costs and required student faculty ratios (Farrell, 2003, October 24).
- For-profit colleges have recently started or acquired nursing degree programs, in high demand by both employers and well-qualified students, a demand that has not been fully met by public and private not-for-profit institutions. For-profit colleges have been less concerned about faculty doctoral degrees and publications and more willing to pay high salaries to well qualified individuals (Farrell, 2004, January 16).
- Public institutions are likely to have direct competition from for-profit colleges to offer initial teacher preparation as well as graduate programs in professional education. The first will arise because of the needs in many states to rapidly recruit, train, and retain new teachers and the second because of the high demand created by mandates for higher credentials and public school salary structures. While traditional institutions are likely to regard the certification requirements as a base on which to build additional content, for-profit colleges are likely to require only the state minimum for certification (Morey, 2001; Raphael and Tobias, 1997). For-profit colleges are likely to compete aggressively for enrollment in graduate programs in professional education by flexible scheduling, other service, and price (Blumenstyck, 2003).
- For-profit colleges are especially likely to continue to expand their on-line divisions because of convenience to students and cost-efficiency. This programming is likely to interest a broader

range of students as the for-profit college's reputation becomes more established. Well-established for-profit institutions with both campus and on-line units are encouraging students to take some courses on-line because enrollments can be increased without increasing facilities costs (Farrell, 2004, February 13).

- For-profit colleges will also add a variety of related education activities to balance off the inherently cyclical appeal of some occupational programs (Farrell, 2004, February 13).

### FACULTY, ACADEMIC CULTURE, AND EDUCATIONAL QUALITY

For-profit colleges understand that faculty preparation, the character of the classroom experience, and faculty satisfaction are central to the quality of the educational experience that any institution of higher education provides. For-profit colleges attempt to structure faculty practices and the academic culture in order to support institutional effectiveness.

Both Kinser (2003) and the Education Commission of the States (2001a) found a great deal of variation in faculty staffing practices within the for-profit degree-granting sector with at least some for-profit institutions relating to faculty in a relatively traditional way. DeVry University is an example of a for-profit college that has a relatively traditional faculty role with approximately half of the faculty appointed on a full-time basis (Kirp, 2003, p. 249). It must also be noted that the for-profit sector sometimes uses terminology in a different way than does traditional higher education. For example, full-time University of Phoenix faculty are primarily administrators spending the majority of their time doing administrative tasks albeit also teaching a significant number of courses.

Kinser also identifies at least 10 institutions that follow a disaggregated faculty model, with the curriculum designed by external consultants or a core faculty with most instruction delivered by a part-time staff. The University of Phoenix uses a disaggregated faculty model relying upon part-time faculty for most direct instruction. Faculty members have earned at least a master's degree in the field of study and are required to have a full-time job in the field of their degree in addition to part-time teaching. With courses based on an intensive 5 or 6 week module, faculty do not teach more than one course at a time. Kinser (2001) goes into more detail about the Phoenix approach to instruction.



A very major factor in the selection process is the comfort of the individual with the teaching philosophy and method of facilitation that Phoenix uses. Faculty participate in a day long training session before beginning teaching. The individual must apply to teach every new course that he/she teaches and be approved by the central administration. Some faculty have had teaching experience elsewhere. Those faculty who have not, say they sought out the University of Phoenix because of Phoenix's philosophy of teaching. With very modest monetary compensation for the teaching assignment, faculty members say they teach for self-satisfaction and pleasure. Faculty members commented to Kinser that they typically spent 5–10 hours in preparation in addition to the 4 hours they spent in class.

Kinser (2001) observes the absence of studies that directly address the teaching effectiveness of faculty of for-profit colleges. More research is needed, he suggests, on how faculty teaching impacts student performance. A closer look should also be taken at practices, philosophies, and models.

According to a variety of surveys and studies, faculty of for-profit colleges are generally satisfied with their employment (Education Commission of the States, 2001a; Kinser, 2001; Lechuga, 2003; Ruch 2001). They are generally disinterested or disdainful about tenure status because they do not see the lack of tenure as problematic (Education Commission of the States, 2001a; Ruch, 2001). David Breneman (in press) accounts for faculty comfort with their University of Phoenix assignment by the relatively short time that the role of being the faculty facilitator of the uniform syllabus requires of them. Students meet for a relatively conventional length of course time — the second meeting of the week is a student learning team meeting which does not on most of its campuses involve faculty participation.

Ruch (2001) acknowledges that integration of academic and business perspectives into the organizational structure is a continuing challenge. Faculty at for-profit colleges understand that if they wish to argue for an academic change, they need to be prepared to argue for it in terms of both the academic and business value added. Kinser (2001) finds that University of Phoenix faculty do not see institutional for-profit status as being particularly significant for what they do. There seems to be a general understanding that the profit making aspect of any legitimate educational organization does not directly affect the interaction between faculty and students in the classroom.

Vicente Lechuga (2003) completed case studies of how for-profit institutions socialize faculty to their organizational role. He finds that

these institutions make it a major institutional priority to create and sustain a top quality instructional staff. They create a variety of actions and rituals that emphasize the close relationship between faculty and the institution. This contrasts with an image of faculty in traditional colleges as a relatively autonomous group of individuals working independently from the institution. In the for-profit setting, faculty must be integrated into the organizational structure and know exactly their place in that structure. With a modest amount of discretion and authority, they understand that they must deliver a product by the method the institution specifies. Because faculty become fully aware of their role during an initiation process and the roles are consistently reinforced by the institutional culture, rarely are there misunderstandings about the extent of discretion they have or other aspects of their role. Overall, “The structures and processes that define for-profit IHE’s [institutions of higher education] are unique and intended to meet the organization’s specific needs for effectiveness and efficiency (p. 23).”

Some useful lessons can be drawn from the experiences of for-profit colleges with organizational support and incentives for faculty without necessarily buying into all of their curriculum and faculty policies and practices. Kinser (2001) believes that it is possible to reconceptualize some of these practices to make them applicable to faculty at traditional public and private not-for-profit colleges. More rewards can be given for teaching — bonuses for research faculty who teach undergraduates and, at primarily instructional institutions, honoraria for especially excellent teachers. He also suggests that greater attention be given to possible contradictions and mixed messages in the interviewing processes at traditional colleges and universities. It is important for the interviewing process to give greater attention to the candidate’s philosophy and experiences relating to teaching.

#### PUBLIC POLICY EXPECTATIONS AND ACCOUNTABILITY

The framework of public accountability in which for-profit colleges operate is designed to ensure that for-profit colleges provide a valid educational experience to students and to hold the colleges financially responsible. The framework of public accountability for for-profit colleges includes a triad of state licensing, accreditation (regional or national overseen by a voluntary association), and federal institutional requirements for student financial aid. Each of these mechanisms involves the establishment of standards, their application in practice and their adaptation as new circumstances arise. The exchange of views continues about

whether on one hand, some of these expectations should be made more stringent or, on the other, whether some restrictions unduly restrain institutions without improving student educational outcomes.

For-profit colleges have sometimes complained about being over-regulated because of the multiplicity of regulators and significant variation in regulatory concepts among the processes and across state lines.

#### STATE LICENSING

Most states regulate for-profit colleges through requirements that institutions be approved to operate and be authorized to grant degrees in that state. These requirements are intended to prevent deception of the public by the use of fraudulent or sub-standard degrees. The rationale is that employers, the public and individuals in assessing the competence of individuals to perform in certain ways use degrees granted as evidence of achievement. Also, this type of regulation helps protect legitimate colleges and those holding degrees from them. Typically, states administer regulation of for-profit degree-granting and non-degree-granting institutions separately. Degree-granting schools are usually regulated by the same agency that regulates private not-for-profit colleges. Non-degree-granting schools are usually regulated by other state agencies.

States ordinarily take one of three approaches to licensure or some combination thereof. First, a state can license on the basis of minimum standards. This involves making specifications with regard to a board, administration, faculty characteristics, curriculum features, size of library, and facility characteristics. With this approach, debate centers on the level of prescription and whether there is enough room for innovation. A second approach is based on models developed in regional accreditation and stresses realization of objectives. Institutions are encouraged to set their own goals and realize them as much as possible. A third model takes an honest practice approach with inspections to ensure institutional integrity on claims made to the public (Kaplan and Lee, 1995, p. 684; Postsecondary Education Convening Authority, 1975, pp. 17–19).

The Education Commission of the States (2000b) reported, based on a survey of eleven states with large for-profit sectors, that most states have no specific definition distinguishing for-profit colleges from private not-for-profit colleges so treat the two similarly. Generally, state regulatory entities find that for-profit universities have come to look a lot like public and private not-for-profit universities.

States that rely heavily on a minimum standards approach, notably

New Jersey and New York, have requirements that are very specific about some educational inputs and process characteristics including instructional contact hours, general education requirements and library volumes. These requirements have been challenging for even well-established for-profit colleges like the University of Phoenix which had different patterns in other places. Because of some New Jersey specifics, the University of Phoenix withdrew a 1998 application in New Jersey to operate at one location but successfully pursued approval at another location in 2001. The University of Phoenix's 2001 proposal to operate a campus in Jersey City increased general education, provided full access to the library of New Jersey City University, and transformed study groups into learning teams. A strong need could also be demonstrated for the Jersey City location because of proximity to a large underserved population allowing more recruitment of minorities and women (Selingo, 2001).

Differences between the regulatory requirements of the various states are regarded by for-profit institutions that have campuses in multiple states as a constraint upon "interstate commerce" in educational services. John Sperling (1997), the founder of the University of Phoenix, has argued for the concept of a "nationally authorized university" to meet the needs of those few institutions which operate on a national scale. The concept casts the U.S. Department of Education in an authorizer role and involves accreditation through intensive student outcomes assessment. What organizational entity would perform the accreditation function for a for-profit "nationally authorized university" that would operate in many states is unclear

#### ACCREDITATION

Institutional accreditation by a voluntary group recognized by the U.S. Department of Education is a pre-condition for institutional eligibility for federal Title IV student financial assistance. For-profit degree-granting colleges can become Title IV eligible through either national or regional accreditation, each having advantages and disadvantages for the accredited institution.

Accreditation standards and processes are undergoing much internal and external scrutiny right now. Governmental expectations for demonstration of educational effectiveness of and for public dissemination of the results of accreditation reviews have increased. More public information is desired about any institutional weaknesses and how they are

being corrected. Simultaneously, institutions are also adapting to new market conditions, student demographics, distance learning and new technologies.

### *National Accreditation*

Most accredited for-profit degree-granting colleges hold accreditation from either the Accrediting Commission of Career Schools and Colleges of Technology (ACCSCCT) or the Accrediting Council for Independent Colleges and Schools (ACICS). Nearly all the institutions accredited by these two groups are for-profit colleges. The Distance Education and Training Council also accredits a significant number of institutions.

The Department of Education under the George W. Bush Administration has had a very positive view of national accreditors. This has been shown in a series of four audits released in 2002 and 2003 by the Inspector General for the Department of Education that assess the standards used by national and regional accreditors. The audit of the ACCSCCT observed that that group had defined quantifiable standards for its member institutions, including completion and placement rates. It also concluded that ACCSCCT could strengthen its standards (Farrell, 2003, August 15)

Based on interviews with leaders of for-profit colleges, the Education Commission of the States (2001a) identifies strengths and weaknesses of national accreditation. The primary advantage of national accreditation from the perspective of the nationally accredited for-profit college is that new degree programs can be rolled out quickly — less than a year from initial conception to approval by national accreditors. One executive who oversaw multiple campuses some nationally and others regionally accredited saw three advantages to national accreditation. These are: ability to allocate less courses to general education, less emphasis on faculty degrees as the measure of qualifications, and a different decision process. The accreditation process of national accreditors is perceived by the accredited institutions as emphasizing quality improvement and information systems. The primary disadvantage of national accreditation is difficulty in articulating programs with and transferring credits to regionally accredited campuses. Also, some employers limit tuition reimbursement to regionally accredited colleges and some states waive licensing approval and review only for regionally accredited institutions. More will be said about transfer of credit issues at multiple places below.

### *Regional Accreditation*

About ten percent of for-profit degree-granting colleges are accredited by one of the seven regional accrediting organizations. These regional accreditors which accredit most traditional institutions of higher education are the longest standing accreditors and are considered to be the most prestigious of institutional accrediting organizations. The regional accrediting agencies are: Middle States Association of Colleges and Schools (MSA), New England Association of Schools and Colleges Commission on Institutions of Higher Education (NEASC-CIHE), New England Association of Schools and Colleges Commission on Technical and Career Institutions (NEASC-CTCI), North Central Association Higher Learning Commission (NCA-HLC), Northwest Commission on Colleges and Universities (NWCCU), Southern Association of Colleges and Schools (SACS), Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges (WASC-ACCJC), and Western Association of Schools and Colleges Accrediting Commission for Senior Colleges and Universities (WASC-ACSCU).

Under the George W. Bush Administration, the Department of Education has been critical of regional accreditors, in contrast to positive observations made about national accreditors. Audits released in 2002 and 2003 by the Inspector General for the Education Department examined the standards of regional accreditors. The review of the Higher Learning Commission of the North Central Association (NCA) concluded that NCA standards for student achievement and measures of program length were very general and adherence to such standards relied on subjective judgment. As a result, the Inspector General concluded that it could not determine the effectiveness of NCA's management controls for ensuring that institutions adhere to NCA standards. In response to these sorts of criticisms, regional accrediting bodies are providing additional demonstrations that they can evaluate colleges carefully and consistently. Regional accrediting bodies doubt however that they can make detailed measurements that would apply across the board to all member institutions because of varied missions and higher order expectations for student learning (Farrell, 2003, August 15).

An Education Commission of the States study (2000a) of the seven regional accrediting agencies and their perceptions of the role and impact of for-profit colleges concluded that the overall approach for accrediting for-profit colleges is no different than the approach to accrediting public or private not-for-profit institutions. Only two of the seven regional accrediting bodies have separate standards for for-profit institutions;

most apply their existing standards differently across higher education sectors, especially standards relating to governance and finance. Accreditors are uncomfortable about significant differences between the way that for-profit colleges operate and traditional higher education practices. For-profit institutions argue that traditional practices should not be confused for qualitative necessity and that practices of another sector are being forced upon them without educational justification. The study found that the general attitude of regional accreditors toward for-profit institutions covered the full range from being suspicious to regarding them as permanent players who have some beneficial effects on higher education.

As governance is a very loaded issue for those associated with traditional higher education, commentators caution about keeping a reasoned perspective about the strengths and weaknesses of governance in for-profit colleges. After examining the way that the academic and business cultures mix at the University of Phoenix, David Breneman (in press) finds that there are mechanisms for advocacy of academic concerns that are not automatically trumped by financial concerns — the institution does not decide all academic issues on a narrow short-term financial basis. For instance in dealing with an accreditation issue, Breneman observes that one point of view may be taken by the academic side while another is taken by the financial side. At the same time, a former chief academic officer of a DeVry campus acknowledges that at the college vice-presidential level the voice of the chief academic officer is very weak (Ruch, 2001, p. 116).

In his study of regionally accredited for-profit colleges, Kevin Kinser (2001) found a great variation in the extent to which some basic academic patterns at for-profit institutions are relatively close to traditional patterns. But many for-profit colleges are non-traditional — having shortened terms, accelerated programs of study, credit for experience and may advertise how quickly individuals can receive the degree.

The Education Commission of the States study on regional accreditors (2000a) identified obstacles for-profits face in their effort to get accredited: governance, finance, evaluator resistance, academic program issues, formalizing processes and procedures, and the substantive change process. Regional accreditors want to see independent governing boards that can protect student interests. For-profit institution boards should have a majority of members who are not shareholders and who are not too closely tied with any overarching corporate board. Therefore, four of the regional associations scrutinize board membership in order to ensure public representation. One of the concerns is the ability of the

governing board to evaluate the CEO in terms of the quality of educational opportunities offered — are they sufficiently independent of the CEO? Accreditors acknowledge that this problem is similar to that faced in some church affiliated institutions. Regarding finances, accrediting associations have difficulty figuring out how to allay concerns of for-profit colleges about releasing information for accreditation purposes because these colleges believe they are thus making it available to competitors. Mechanisms for confidentiality that have been developed by regional accreditors include fair summaries, information held privately, and external audit expectations.

Accreditors have difficulty, the Education Commission of the States (2000a) continues, fully preparing evaluators from not-for-profit colleges to evaluate for-profit colleges. As all evaluators are volunteers who may not have a second opportunity to participate in another for-profit evaluation, it is agreed that better training is needed. For-profit colleges would prefer that regional accreditors used a smaller number of evaluators especially prepared to do evaluations of for-profit colleges. Academic program issues include how long students have been enrolled, the numbers of faculty, extent of general education requirements, and transfer credit. For-profits are not generally extended courtesies by not-for-profit colleges during their developmental stages when program development in a cooperative umbrella might facilitate quick start-up. Accreditors have often helped two-year for-profit institutions develop articulation agreements with four-year institutions because of a lack of prior experience by the for-profit college with that process. Regional accreditors have also worked with privately owned colleges on formalizing processes and procedures because these colleges had previously operated very informally with little or no documentation concerning operating procedures.

The Education Commission of the States (2000a) notes that for-profit colleges have real difficulty with the timing of the process for making any substantive change, that is a significant change in mission or programs. The two-year time frame connected with getting recognition for a substantive change prior to its implementation is a real operating handicap for any organization whose success is heavily influenced by the quickness of its response to the marketplace.

For-profit colleges regard seeking regional accreditation as an important business decision because it greatly facilitates the transfer of credit earned at that institution. Kevin Kinser notes that regional accreditation is an important seal of approval, the “coin of the realm (p. 4).”



It is a mark of distinction that provides an association with more traditional prestigious institutions. It is especially important if there are competing for-profit institutions in the geographic area. At the same time, he notes that still there are not that many for-profit colleges that are seeking regional accreditation; not many for-profits owned by public corporations are attempting to make the transition to regional accreditation; and not many regionally accredited campuses are pursued for buyout by other corporations. The overall pattern to date suggests to Kinser that national accreditation is sufficient for a state-licensed for-profit college in good standing for federal financial aids for its students to do quite well. It might also suggest that a regionally accredited campus has already achieved its full valuation potential and is unlikely to further appreciate.

Kinser (2003) documents differences in patterns of accreditation between regional accrediting bodies noting that there is at least one for-profit college accredited in each region. Only North Central has accredited a virtual university. Five out of seven doctoral granting for-profits are located in the North Central region as are nearly all regionally accredited for-profit institutions using a disaggregated configuration of faculty duties and a non-traditional calendar. He gives some examples of “accreditation shopping” — institutions deciding where to locate their headquarters and other legalities on the basis of where accreditation prospects would be best.

Kinser (2003) poses some questions about the future of for-profit colleges and regional accreditation. He thinks it quite possible that if regional accreditation were to become a growing trend, regional accrediting bodies would have a hard time keeping up with the demand for their services and advice. Also, undoubtedly accreditation status figures into changes in ownership. In the abstract, regional accreditation would seem to be a source of stability, Kinser observes, but it is not clear how it enters into buying and selling calculations. The case of the multi-campus Art Institutes has interesting complexities because it has some campuses that are nationally accredited and others that are regionally accredited.

An Education Commission of the States report (2000a) reached the conclusion that the presence of for-profit colleges had as yet had relatively small influence on regional accreditation. At the same time, it emphasized that the self-interest of these associations requires they do some rethinking of their concepts of college education and accreditation as they will soon face similar issues with traditional institutions.

### *Specialized Accreditation*

For-profit colleges have the greatest difficulty setting themselves up and entrenching themselves in occupational fields where approval of the program by a specialized accrediting body is necessary because that accreditation is directly tied to state licensing of individual practitioners or to the primary national certification in that field. There are success stories especially in clinical psychology where a number of high enrollment doctoral programs exist and are accredited by the American Psychological Association. Much more problematic is the field of law, a field in which graduation from an American Bar Association (ABA) law school is required to sit for the state bar exam, the State of California being the primary exception. Prior to 1995, the ABA declined to consider accreditation for for-profit schools, a position changed only after the ABA lost a legal challenge to its stance. Only three for-profit schools, one of which became accredited before it changed its status from not-for-profit to profit, are approved by the ABA. The ABA has been historically inhospitable to non-traditional not-for-profit institutions as well; it remains opposed to reviewing any institution offering only on-line instruction. When hiring deans, non-traditional schools, both not-for-profit and for-profit, have started to turn to individuals with extensive experience with the ABA accrediting process and this seems to be easing the process (Sachdev, 2004). It is likely that for-profit schools will be able to establish themselves in more high enrollment professional areas as non-traditional not-for-profit schools establish themselves in some of these areas and new institutions learn more about the social interaction processes in which accreditation is intertwined.

### INSTITUTIONAL ELIGIBILITY FOR FEDERAL STUDENT ASSISTANCE

The federal financial contribution to higher education comes mostly through student financial aid rather than through direct aid to institutions. The federal government establishes requirements for certifying an institution's administrative and financial capability to participate. Many requirements apply to all institutions while others apply only to for-profit colleges. Some which technically apply equally to all sectors may have a disproportionate impact on for-profit colleges. The amendments toughened the institutional eligibility requirements for student financial aid to ensure that federal monies were being spent on legitimate educational programs and that student loan defaults were not high. The federal government has taken a similar approach in a number of areas outside

higher education where fraud and abuse arise in new programs that start out with few regulatory controls.

The post-1992 history covers implementing the controls, observing the extent to which a control has had the desired outcome, identifying any undesirable side effects, and perceiving whether changing circumstances require regulatory change. This provides the basis for constructing a useful alternative. For-profit colleges regularly make the case that the various rules make it difficult to provide opportunities to more of the low-income students Title IV funding is supposed to help. As circumstances change, some not-for-profit colleges begin to use practices very similar to those banned by federal regulations reraising the question of what practices should be acceptable. On going exchanges over Title IV experiences over the last twelve years have resulted in no change in some areas, in refining regulations in others, and in abandoning regulation in still others.

This subsection addresses rules, which are described in the paragraphs that follow: the default rate, incentive compensation, the 90-percent rule, the 12-hour rule, and the 50-percent rule. The next subsection addresses the two fundamental issues that for-profit colleges have pursued in the reauthorization process: definition of "institution of higher education" and transfer of credit.

Loan default by students in repayment of student loans is still a very strong federal and institutional concern, but a much smaller problem for for-profit colleges that participate in federal student aid programs than it was in earlier years. This is due to a variety of reasons including the 1990's shakeout of very marginal schools that could not measure up on program content, program length, recruiting practices, and general financial responsibility. Also participating institutions exercise greater diligence because of the bad press that comparisons of default rates can bring including the risk of additional federal scrutiny and possible disqualification. On September 16, 2003 the Secretary of Education announced that the national cohort default rate (for the aggregate of non-degree and degree-granting institutions in all sectors) for FY 2001 was 5.4 percent. The national cohort default rates for for-profit colleges less than two-year (non-degree), two-three year, and four+ year was 10.8 percent, 9.3 percent, and 7.4 percent. No for-profit colleges or colleges in any other sector were subject to loss of eligibility due to an FY 2001 (one year) official cohort default rate greater than 40 percent or due to a official three year cohort default rate greater than 25 percent (U.S. Department of Education, 2003).

The ban on incentive compensation, included in the 1992 amendments, was written in general terms to discourage recruiting misbehavior in admitting students and processing federal financial aid to individuals. It was basically aimed at eliminating the practice of for-profit college recruiters being commissioned sales people. Because the ban was broadly constructed, clarifications were requested, resulting in federal letters of interpretation that were not necessarily consistent. How for-profit institutions could use ordinary business practice to evaluate and compensate their recruiters remained unclear. Also, both not-for-profit and for-profit institutions began to face questions as to how recruiting consultants could be utilized and compensated with the U.S. Department of Education finding fault with some not-for-profit colleges. Additionally, the legality of paying a web portal on a per head basis for every potential student who clicked onto the link to the college's website was unclear. The 2002 revised regulation identifies a number of safe harbors for institutional practice giving examples of the types of compensation adjustment that are consistent with the requirements of the regulation. An example of a permitted safe harbor was adjustment of the compensation of recruiters no more than twice per year as long as those adjustments were not based solely on numbers recruited (Farrell, 2002, November 4).

The 90-percent rule was originally the 85-percent rule but an additional 5 percent latitude was provided in 1998. It requires that for-profit colleges draw no more than 90 percent of their revenues from federal Title IV student financial assistance. The 90-percent rule has never been popular with for-profit colleges but traditional institutions generally think it is warranted. This rule accords with the federal government common sense that programs totally or nearly totally supported by federal funding (lacking at least a small clientele that is attracted while able to pay its own way) are open to too much fraud and abuse. The for-profit sector has criticized the rule arguing that it discourages serving a larger number of needy students. The federal government responds that an institution has to have some other resources to meet operating needs including paying back federal overpayments and to contribute to reasonable financial stability. For-profit colleges have been able to prevent this rule from being enforced and have continued to seek its elimination.

The 12-hour rule required higher education programs in all sectors that did not use a standard semester, quarter, or trimester system to offer a minimum of 12 hours of coursework a week in order for their students to be eligible for Title IV financial aid. It had been viewed as a potential limitation on distance education providers in all sectors. The rule had

been designed to eliminate the fraud and abuse of earlier periods during which there had been no requirement for significant contact. Distance education providers concentrated in but not limited to the for-profit sector had argued that this has prevented them from developing innovative on-line programs. The opposition to changing the rule focused on possibilities of new fraud and abuse but did not offer an alternate method of regulation. In late 2002, the 12-hour rule was allowed to expire and was replaced by a regulation that requires institutions to offer at least one day of instruction per week, extending an understanding used for programs using a standard calendar (Carnevale, 2002, November 15).

The 50-percent rule, written prior to the development of instruction on the internet, requires that both not-for-profit and for-profit institutions provide at least half of their instruction in a classroom based environment. This was meant to disqualify free-standing correspondence school institutions of a sort which had engaged in fraudulent or abusive behavior in the 1970's and 1980's. The rule was intended to fund students in correspondence school study only when the primary instruction offered by the institution used the regular classroom setting. An institution that conducted most of its instruction in a classroom, it was reasoned, would probably have greater financial stability and the quality control which was applied in the classroom setting would also be applied to students studying in a different manner.

With the advent of on-line instruction and the entrance of more established institutions into the practice of non-classroom instruction, various proposals have floated around on how to prevent fraud and abuse without retaining the 50-percent rule. In 1998 Congress created a demonstration program to let institutions experiment with on-line instruction and other distance education without endangering their Title IV financial aid eligibility; this program is set to expire in 2005. Originally Congress set the limit of fifteen institutions/systems/consortia and then increased that limit by thirty five. In late 2003, the U.S. Department of Education approved an additional five participants bringing the total number of institutions/systems/consortia to twenty nine (Carnevale, 2003, December 12).

In February 2004 the General Accounting Office (GAO) reported on a study of fourteen institutions that enroll a large portion of their students at a distance and that together enroll about 225,000 students. That study found that institutions in all higher education sectors are already being affected by the 50 percent rule or soon will be. The report said that the 50 percent rule might soon deny a significant number of distance education students access to federal financial aid. The

University of Maryland University College would be hit especially hard if it were not exempted by the 50 percent rule (it is exempted); about ten thousand Maryland students would no longer receive \$65 million in federal student aid each year. The GAO suggested that the U.S. Department of Education continue granting waivers while monitoring performance or consider granting waivers only to institutions with a low loan default rate. But the GAO warned against dropping the 50 percent rule without taking other measures to safeguard the aid programs. The report also suggested that the U.S. Department of Education work with accrediting bodies to develop guidelines to assess the quality of distance education programs. Finally, it acknowledged that changes in the rule would bring more students into federal student financial aid programs thus increasing their cost (Foster, 2004).

In the longer term, one possibility would be to limit institutional participation to those institutions that have participated in federal student loan programs for at least three years and have a loan default rate of less than a certain figure. Ten percent for the three most recent years has been mentioned. Working only with institutions that have a good record on loan default, would seem to greatly reduce the risk of fraud or abuse. Accreditors continue to resist the federal government establishing specific standards on non-classroom instruction that the accreditors would then need to enforce (Foster, 2004).

In addition to the financial requirements of the U.S. Department of Education, publicly-held for-profit colleges must maintain a federal public record with the Securities and Exchange Commission. The S.E.C. is charged with ensuring that investors have full financial information about the companies in which they invest and requires that for-profit colleges file detailed quarterly financial reports. In early 2004, there have been serious allegations about two for-profit colleges in the S.E.C.'s jurisdiction. In March 2004 a suit was filed and federal agents seized records for one large multi-campus for-profit college alleging alteration of records to inflate its operational and financial performance. The complaint further alleged that the company used falsified records to secure federal financial aid payments and that its accounting practices were not in accord with generally accepted principles (June, 2004, March 12). In June 2004, an amended shareholder lawsuit alleged manipulation of student records and financial statements for another large multi-campus for-profit college. The S.E.C. also announced a formal investigation of this college (June, 2004, June 24).

The pendulum that had swung in the early 1990's toward minimizing opportunities for fraud has swung toward a concern about minimizing the impact of regulation on institutional ability to serve non-traditional students. In all likelihood, efforts to find ways to limit the specificity of regulation will continue especially for institutions whose students have low rates of loan default and that meet other criteria of responsible operation.

#### *Federal Reauthorization*

The legislative process for reauthorizing the Higher Education Act has presented for-profit colleges with an opportunity to seek further reduction of regulation of existing institutions, to seek eligibility for additional categories of federal funding, and to create federal government pressure upon regionally accredited institutions to accept credit from institutions that are not regionally accredited.

All this has gone on in a national political context in which both the for-profit sector and not-for-profit sectors are quite active. As Pusser and Wolcott (in press) have observed, the for-profit sector seems to be amassing resources and winning excellent access to key legislators. Individual for-profit colleges can donate directly to individual candidates or political parties and therefore they can use PAC's and soft money contributions. They make a number of sizable contributions aimed at key legislators. While noting that at present the political strength of the not-for-profit sector is less visible, Pusser and Wolcott suggest that increased political activity and lobbying by the not-for-profit sector is likely. They consider not-for-profit higher education "... something of a sleeping giant. Given the emerging shifts in state and national policies, and the potential conflict between not-for-profit and market ideologies, it appears that there are now significant incentives for the giant to awaken (p. 39)."

The two fundamental political issues in the 2003 and 2004 exchanges in the reauthorization process have been the definition of "institution of higher education" and the facilitation of transfer of credit from nationally accredited to regionally accredited institutions.

#### *Federal Reauthorization — Definition of "Institution of Higher Education"*

Advocates of for-profit colleges called upon the U.S. Congress in 2003 and 2004 to change the definition of "institution of higher education" in other parts of the Higher Education Act to include for-profit

colleges. This is the key to for-profit college eligibility to complete for grant funding under Titles III and Title V. (For-profit colleges were already included in the definition of “institution of higher education” for all Title IV student grant, loan and closely related programs.) Those titles are designed to help struggling colleges that serve sizable populations of low-income students improve their infrastructures and programming and support actions to increase endowments from other sources. The core of the for-profit college rationale is that the term “institution of higher education” should be defined consistently throughout the Higher Education Act and that most for-profit colleges have precisely the clientele that Titles III and V grantees are intended to serve. Other sectors of higher education strongly resisted changing this definition with the argument that direct institutional subsidies should not go to colleges that have profit making as their fundamental motive. Resistance from public institutions has been high in 2003 and 2004 because of financial circumstances — these federal pots of competitive grant monies are not growing and higher education is being used as the budget balancer in many states. This contrasts with the rapid growth and visible profitability of the major for-profit institutions in the last ten years.

Differences in the two points of view are shown in a point/counterpoint presentation in the November 15, 2003 *Chronicle of Higher Education* by David Moore, Chairman and CEO of the Corinthian Colleges and Donald Heller, a Pennsylvania State University faculty member whose research focus is on student financial aid and access for low income students. David Moore’s presentation emphasizes the high enrollment of low-income students at for-profit colleges and the important public purpose that the colleges serve. He generally tries to minimize the differences between sectors of institutions and argue for the changed definition in terms of a level playing field for all institutions and the low-income students they serve. All institutions, he emphasizes, are responding to changed student demographics. He contends that for-profit institutions meet higher accountability standards because the U.S. Department of Education regulates them more than not-for-profit institutions. For-profit colleges that are publicly owned also have reporting requirements to the Securities and Exchange Commission. He asserts that for-profit institutions are providing significant public service albeit not in the form that not-for-profit institutions refer to it, through preparing well qualified individuals for the workforce and paying taxes as a profit-making business. All assistance programs should be measured by the benefit that they provide students not institutions.

Donald Heller contends that the public does not have the same call



upon the full resources of for-profit institutions that they have on the resources of not-for-profit institutions. Public institutions have responsibilities for public service and research that the for-profits do not have. Also, public institutions are fully evaluated on their effectiveness in meeting public needs while for-profits have no explicit obligation to serve their communities. Not-for-profits do much more reporting although not to the same places or in the same ways as for-profits; they not only report heavily to state governments but are held directly accountable for use of state funds. Not-for-profit institutions are much more transparent to the public. Information on the finances of for-profit institutions is available through the Securities and Exchange Commission only if they are publicly owned and that information does not include salary and profitability information. Heller argues that for-profit institutions can hardly charge that they have not had a level playing field in light of the enrollment growth and healthy profits they have had. He also expresses concern about current financial circumstances of not-for-profit institutions that have borne the brunt of the recession. Other critical commentators have observed that the full set of consequences of such a change are unclear because of the interconnections between this definition and other federal and state laws. This change would probably permit for-profit colleges to participate in federal programs administered by federal agencies other than the U.S. Department of Education and in some state programs (“List of concerns and suggestions for improvement: The College Access and Opportunity Act HR 4283,” 2004).

#### *Federal Reauthorization — Credit Transfer*

Transfer refers to the process by which credits that were awarded by one college are accepted or not accepted by another college. Issues relating to transfer have become more prominent in higher education generally because 60 percent of students earn credit at more than one institution. Accrediting bodies require institutions to have clear standards by which academic transcripts from another institution will be used to determine whether that credit meets their own academic requirements. It involves making judgments about the academic quality, comparability, appropriateness and applicability of the prior academic experience to the intended program of study.

Both two and four-year for-profit colleges as well as community colleges encounter difficulties with the acceptance of their credit in transfer to a four-year public or private not-for-profit institution. The

problems for community colleges are not as severe as for for-profit schools because of different curriculum content, development processes, and staffing patterns that are also consistent with regional accrediting body expectations.

For-profit colleges that are nationally accredited believe that the major barrier to transfer of their credit has been that they are nationally rather than regionally accredited. In congressional hearings on reauthorization, the Career College Association cited a study conducted by the Institute for Higher Education Policy that has been described only in general terms. According to its Congressional testimony reported in the press, the IHEP study found that regionally accredited institutions accepted a markedly lower percentage of student requested credit transfer from nationally accredited institutions than from regionally accredited institutions (Farrell, 2003, September 5). Information on the research methodology of that study has not been made available.

Proponents of nationally accredited for-profit colleges have sought to establish the regulatory requirement that all colleges must base their transfer decisions on whether a student's previous courses are equivalent in content to those which the college offers and whether the student completed such courses at its required level of proficiency. These proponents asserted that decisions have been made using arbitrary standards such as the institution's type of accreditation to determine which courses are creditworthy. One rationale for this change is eliminating the federal student aid costs and wasted student time connected with retaking courses at another institution (Farrell, 2003, September 5).

Proponents said that they are only putting into law a principle already accepted within traditional higher education organizations. They pointed to the 2000 Council for Higher Education Accreditation (CHEA) statement that "Institutions and accreditors need to assure that transfer decisions are not made solely on the source of the accreditation of a sending program or institution (Council for Higher Education Accreditation, 2000)." CHEA, the American Council on Education and the American Association of Collegiate Registrars and Admission Officers also endorsed this principle in a 2001 joint statement.

Not-for-profit higher education institutions strongly objected to such regulatory requirements as an unprecedented federal intrusion on the academic autonomy of colleges and universities. They wished to avoid creating a federal mandate on a fundamentally academic issue for the first time. The concern is that by doing away with the subtleties of credit evaluation, an institution could find many students to be misplaced in a course for which they are not academically prepared. In response,

the proponents claimed that traditional institutions have not been receptive to genuinely attacking transfer issues for students through other approaches and new ways must be found to solve these problems.

Nationally accredited for-profit colleges would like the reauthorization to mandate regional accrediting bodies to heavily police credit transfer. Opponents of such provisions argue that the fundamental purpose can be achieved in a much less intrusive fashion — regional accreditors simply require that institutions have policies against denial solely on the basis of national accreditation and ensure that institutions do have that policy. That approach avoids elaborate and expensive regulation and reporting and avoids imposing a federal standard (“List of concerns and suggestions for improvement: The College Access and Opportunity Act HR 4283,” 2004).

For-profit colleges and community colleges look favorably on the course matching and course numbering system used in Florida. That system was originally established to ease transfer of community college credit but for-profit colleges including nationally accredited colleges now participate. The system relies on committees of faculty members and college administrators to review courses at all participating institutions. The committees compare the course syllabi, faculty credentials and assigned texts and number each course number based on content and rigor.

At a May 28, 2003 congressional hearing, the American Council on Education and a large number of cooperating organizations, noted various efforts to document the extent of the transfer problem and to provide central sources of information. Suggestions were also made about getting more voluntary articulation agreements underway. The national registrars group is developing a centralized database of credit acceptance policies by the receiving institution. A cooperative American Association of Community Colleges and the American Association of State Colleges and Universities project deals with problems of access to the baccalaureate including transfer credit. In order to go beyond anecdotal stories on problems of transfer, a statistically valid study is needed to document the nature and scope of the problem in one of two ways: either with a representative sample of receiving institutions or by surveying a representative sample of students from sending institutions. The statement also proposes a National Academy of Science effort to undertake a methodologically sound and statistically valid study to identify ways credit transfer can work more efficiently, examine voluntary agreements, and suggest ways to expand them. The federal government should encourage the expansion of voluntary articulation agreements especially

to find ways to overcome limitations of geography. Toward this end, the statement proposes that a new competitive grant program be established to enable broad based consortia to develop articulation agreements, with priority given to proposals crossing state boundaries and including multiple higher education sectors (Alliance, 2003).

The federal higher education reauthorization process has provided the for-profit sector an opportunity to very assertively seek changes in the federal regulatory/funding framework with the rationale that it will help them serve students more effectively. Beyond the federal reauthorization, various federal and state governmental actions, will be strongly influenced by the public policy desire to increase the access and success of low income and adult students. In seeking that goal, public policy actions may also indirectly strongly benefit the financial bottom lines of for-profit colleges.

#### EVOLVING PUBLIC ACCOUNTABILITY ISSUES

Differences of opinion between for-profit colleges, not-for-profit colleges and government policy-makers have emerged and evolved in the context of each of the areas of public accountability above. In most instances, for-profit colleges have accommodated in some way to the more traditional point of view while continuing to articulate the desirability of seeing things differently. They emphasize demonstrations of student learning outcomes as a more significant proof of quality than impressive inputs. These articulations seem to have nudged decision-makers to think further about the standards and how they are applied in these accountability processes. The fact that many not-for-profit colleges have also started to more directly respond to market forces has contributed to some implicit if not always explicit convergence of points of view.

Ways to change public accountability expectations for for-profit colleges so they are more effective in accomplishing public policy ends in a more global marketplace will continue to be debated. The topics of debate can be grouped into three areas: basic consumer information and protection, state policy integration, and realignment of licensing and accreditation standards.

#### CONSUMER INFORMATION AND PROTECTION

Basic consumer information and protection foci include: consumer information available through state authorities, ambiguities of consumer

financial protection, and preparing for issues likely to arise as the for-profit sector matures.

Discussion in state policy circles about consumer information focuses on ways to provide information to potential students that would help them to understand the characteristics and standing of educational institutions. The most visible effort to provide this kind of information to students about higher education institutions in all sectors has been made by the State of Oregon Office of Degree Authorization. This effort exists within the framework of state legislation on awarding and using fake degrees, defined as any degree awarded by an institution lacking some recognized national or regional accreditation or specific authorization by the State of Oregon. The law makes it a misdemeanor to use a fake degree to get a job or promotion. This system provides useful information to employers and students via a website (<http://www.osac.state.or.us/oda/>) regarding accreditation generally and specifically about schools that are either “degree mills” or have not been accredited. In 2004, officials in a number of states began looking into the possibilities of legislative adoption of provisions similar to those in Oregon. Also, the U.S. Department of Education is preparing an official list of all nationally or regionally accredited universities (Smallwood, 2004, p. A17). Bottom line: the State of Oregon’s website helps students avoid the most problematic possibilities. But it does not provide a full range of information to potential students about how to identify institutions and programs with specific qualitative strengths.

More attention also needs to be given to the nature of the contractual and business relationship between for-profit colleges and students with the intent of ensuring a reasonable balance between the parties and fair treatment of students. Pusser and Doane (2001) assert that students are vulnerable to an information asymmetry in their relationship with any higher education institution because the producers are more knowledgeable about the product than are the consumers. Pusser and Doane believe that for-profit status greatly increases the chances of fraud in the relationship. Speaking in somewhat different terms, Robert Ruch (2001, pp. 95–97) identifies the sales function as showing the darker side of the profit motive. Due to the emphasis on making the sale to the student, he observes that the presentations given are less likely to be accurate than in other higher education sectors and usually will involve some sales pressure tactics. Also, journalistic coverage has been given to one controversial practice used by nearly all of the large multi-campus for-profit colleges — requiring students to sign statements that in the event of any dispute over the enrollment contract, the student consents for

the disagreement to be submitted to arbitration, thus preventing lawsuits. Many aggrieved students dislike these arbitration provisions (Farrell, 2003, April 18). As information about actual institutional dispute behavior is limited and anecdotal, more needs to be known about the extent of the problem and what solutions, if any, may be possible.

New public policy issues are likely to arise when degree-granting for-profit colleges are no longer in growth circumstances. That large for-profit colleges were in the growth mode was quite visible during 2003 through actions such as adding campuses, mergers and takeovers, moving into new states, and contracting with traditional universities for program segments. The larger for-profit colleges have a variety of additional opportunities to create and alter existing revenue streams. They are trying to maintain a relatively high level of growth through on-line divisions and diversification of related educational activities. Some institutions are also becoming significantly more active outside the United States. Relatively small increases in class size also significantly increase enrollment capacity at the larger institutions (Farrell, 2004, February 13). In high population growth areas, for-profit colleges may also consider ways to tap into the traditional college age population. The Apollo Group, the corporate parent of the University of Phoenix, is moving to serve recent employed high school graduates at Axia College, a new division of its Western International University. It will use a teaching style with more face-to-face classroom time than used at the University of Phoenix and put somewhat more emphasis on amenities (Blumenstyk, 2004, April 23). The University of Phoenix also lowered its minimum age from 23 to 21 early in 2004 and then in June lowered it to 18 while indicating that it will probably serve younger students in separate course sections. It believes it will have especially strong opportunities in California where demand in community colleges is expected to far exceed supply (Blumenstyk, 2004, June 25).

When the larger for-profit colleges reach the limits of growth, they will be challenged to maintain their current level of responsiveness and modernity. Conflicts between profit making and maintaining levels of quality service to students will be serious and need to be addressed in a public accountability context. For-profit colleges are likely in the short run to avoid abruptly closing a problematic location because of potential spinoff difficulties with accreditors and state licensing authorities. But things become much more problematic if the overall corporate entity becomes financially distressed.

#### STATE POLICY INTEGRATION

Regarding state policy integration, state policy makers are concerned about the extent to which there is state policy relating to the for-profit degree-granting institutions aside from licensing and perhaps state student financial aid for regionally accredited institutions. Licensing has been a function that most states have construed very narrowly as ensuring that a minimum floor has been achieved. State policy has involved neither the range of state regulation nor resources the state applies to public and private not-for-profit colleges. The Education Commission of the States (2001b) notes some policy considerations for the states including the possibility of involving for-profit institutions in state planning and policy initiatives. This might include access to funding for high demand programs and funding for infrastructure development. The Education Commission of the States wonders to what extent the market should determine what institutions operate and which programs are offered or whether, on the other hand, states should be concerned about competition and duplication of programs among sectors. The report concludes that there are still unresolved issues about how public funds should be used for private enterprise including the conditions that might be attached.

The possibility of more fully integrating for-profit institutions into state policy, along the lines the Education Commission of the States describes above, arouses two somewhat conflicting aspects of the for-profit view of the world. On the one hand, for-profit colleges would like to see all higher education institutions, not-for-profit and for-profit, to be seen as equally worthy alternates for meeting the educational needs of employers and employees with similar state funding available. But on the other, they have strong concerns about being subject to additional regulation.

#### REALIGNMENT OF LICENSING AND ACCREDITATION STANDARDS

The third topic, realigning licensing and accreditation, includes examining differences between regional and national accreditation and also moving toward more uniform standards in state licensing and regional accreditation. Kinser (2003) suggests that closer attention should be given to national and regional accreditation as parallel systems. What are the benefits and limitations of each accreditation from the perspective of students and from the perspective of the institution? Although evidence is anecdotal, students do not seem familiar with the reality that credit earned at a nationally accredited institution does not

generally transfer to a regionally accredited institution because of differences in course purposes, content, and student evaluation methods. In March 2004, a case was filed in federal court by a former student of a Florida for-profit college claiming that she had been misled about the accreditation status of the institution. That college holds a national accreditation, was briefly in a candidacy status with a regional accrediting body but then removed itself from consideration partially because it would have been unable to add new programs during the candidacy. It is unlikely that the plaintiff will prevail because she signed institutional waivers that no representation was being made about transfer credit because transferring credit was a prerogative of the receiving not the sending institution (Haber, 2004). The case has political implications however, because press coverage of the story has highlighted the fact that students who wish to transfer credit from a nationally accredited to a regionally accredited institution frequently encounter difficulty.

Another possible way of meeting the needs of students and institutions that operate in the context of national accreditation is to fold that accreditation in some way into the regional accreditation framework. Judith Eaton, the President of the Council for Higher Education Accreditation the umbrella organization which encompasses both national and regional accrediting bodies, has identified some ways in which regional accreditation might better accommodate itself to the needs of institutions currently accredited by national accreditors. One possibility would be for regional and national accreditors to reach some agreements defining quality and quality control measures. Another possibility would be to develop an additional track within regional accreditation (Eaton, 2001). No significant steps appear to have been taken in either of these directions. Both possibilities raise significant conceptual, organizational, and political issues.

Individuals associated with the for-profit sector regularly highlight in public forums the disadvantages of fractionated state licensing and regional accrediting structures. Laura Palmer Noone, the President of the University of Phoenix, has been critical of the lack of common standards for licensing among the states which she views as the primary underlying factor in differences among the regional accrediting agencies and therefore a structural impediment to change. She believes that it is not simply a matter of meeting the highest of the standards because of apparent conceptual inconsistencies between the standards (Morgan, 2002). Robert Ruch (2003) presents the rationale for an ideal pattern from the perspective of the large regionally accredited for-profit institutions: the establishment of a single set of performance standards for all



degree-granting higher education institutions in all sectors. In order to clarify expectations for institutions, such a set of standards should address both educational inputs and outcomes.

Some steps in the direction advocated by Noone and Ruch are likely because of political pressures to simplify a complex licensing/ accrediting framework. But major steps are unlikely in the near future because of the historical resistance of the American polity and educational system to national pattern setting. A more likely movement in the direction of some greater commonality of approach between the regional accrediting bodies is one suggested by Judith Eaton (2001), the possibility that multiple regional accreditors might develop a common approach to accrediting for-profit institutions.

Kinser (2003) describes a level of variation between the approaches of the various regional accreditors that might lead to strong pressures upon regional accreditors to operate within similar conceptual frameworks. Although each of the regional accrediting bodies has accredited at least one for-profit institution, he gives examples of significant differences in the level of experience of the regional accrediting bodies with non-traditional institutions generally and for-profit colleges in particular. As of Fall 2003, five of the seven regionally accredited for-profit doctoral universities, nearly all of the regionally accredited for-profits that have a disaggregated faculty model and other non-traditional characteristics, and all regionally accredited virtual institutions are accredited by the North Central Association. Kinser also gives some examples of for-profit institutions that made decisions on where central offices or campuses were to be located on the basis of the perceived receptiveness of the accrediting agency with which they would be dealing. Kinser raises the question of just how far regional accrediting agencies can vary from each other before regionalism becomes unsustainable. He also goes on to identify distance education providers and the expansion of institutions across regional lines as posing challenges to the way that regional accrediting bodies continue to operate.

The analysis now switches from the status of and issues related to the for-profit sector to the implications of the for-profit sector and marketization for the decisions of public colleges.

## IMPLICATIONS FOR DECISIONS OF PUBLIC TWO AND FOUR-YEAR COLLEGES

### INDIRECT RATHER THAN DIRECT IMPACTS

An examination of the impact of the operation of for-profit colleges upon two and four-year public institutions is only to a small extent an

examination of direct impacts. The direct impacts of for-profit colleges upon public two and four-year colleges and universities have not been large to date for a variety of reasons. The overall magnitude of their enrollments and graduations is very small compared to public and private not-for-profit higher education. According to the National Center for Educational Statistics, degrees granted by for-profit colleges in 2001–2 were 119, 269 — approximately 5 percent of the total for all degree granting institutions (Knapp, Kelly, Whitmore, Wu, and Gallego, 2003, p. 3). There has been little direct competition because aggregate demand for higher education has increased relative to supply. Also, the for-profits have primarily served niche markets that have not been well served by other institutions. Additionally, for-profit colleges do not ordinarily compete on price with public institutions because tuition at for-profit colleges is substantially higher than community college or public university tuition. The tradition of relatively low public institution tuition is based on the substantial direct public subsidy received for operating budgets, a pattern which is, however, being eroded and is at further risk.

The impact areas examined below involve more indirect impacts. They include: the instability of the state government subsidy, the uncertainties of the public social compact, the claim that public benefits are being produced in the for-profit sector, the possibility of state funding of student slots outside public colleges, and the relative weight to be given to various programs and clientele.

More threatening to public institution prospects than the direct competition of for-profit institutions is the instability of the state government subsidy received through the state appropriation process. The level of state government subsidy is at risk because of general economic circumstances, state budget priorities, and the evolving political-economic view of higher education. Environmental factors will require public institutions to carefully examine their social compact, identify their fundamental obligations, and then pursue them in an environment that includes for-profit institutions. The experience of for-profit institutions may also provide insights to help public institutions refocus aspects of their own operations. Government policy-maker views are likely to draw the attention of public institutions to the success of for-profit institutions in graduating students and in cost containment. Future prospects for public institutions will depend on the extent of their responsiveness to public policy concerns that will arise in these areas.

The threat that for-profits pose, possibly in an alliance with private not-for-profit institutions is indirect, rather than direct, influence on governmental policy-makers willingness to support a high level of direct subsidies and relatively low tuition.

The evolving political view of higher education seems to focus less on direct state provision and state subsidy to public higher education institutions than it did in earlier years. Overall, Pusser and Wolcott (in press) write, the historical pattern of higher education has been heavy on public provision through state chartered institutions (public supply) combined with state and national subsidies to nearly all accredited institutional types through student financial aid. For many years, state governments served as provider (through public universities and community colleges), subsidizer and regulator of higher education. Direct state subsidy of public institutions' operating budgets, essentially unrestricted block grants, Pusser and Wolcott write, has been the financial backbone of the higher education system. But now in most states there is an on-going negotiation over the support of public higher education as the largest discretionary expenditure in a state budget with many competing human services. There has been discussion in many states, most notably Colorado and Texas, of doing away with state block grants to public universities in favor of funding accredited institutions on a headcount basis (Hebel, 2004). In these circumstances, Pusser and Wolcott point out, the public sector of higher education must more clearly articulate the case for public provision.

#### ADDRESSING MARKETIZATION ISSUES

The operation of for-profit colleges is one aspect of the more general marketization of higher education that leads public two and four-year colleges to examine fundamental questions about their institutional mission and state government relationships. Marketization refers to any institutional decision to offer services with the primary motivation of receiving the funds it will generate (Slaughter and Leslie, 1997). That very fundamental examination can then be followed by questions of adaptation, to what extent and in what ways lessons from the experiences of for-profit institutions will help in the pursuit of fundamental public sector goals.

Public institutions must engage both external discussions with governmental leaders and internal discussions aimed at a reconciliation of market-oriented values with broader social and policy goals. They must

decide to what extent they will emphasize longer-term public interests and historic functions and to what extent and in what manner they will respond to market forces.

This analysis deals first with public senior institutions and then second with community colleges. In both cases the literature addresses mission questions including relationships with state government and also possible adaptive organizational patterns. The latter includes the extent to which either positive or negative lessons can be learned from the experience of for-profit institutions.

#### SENIOR PUBLIC INSTITUTIONS

##### *Mission*

Many higher education leaders and scholars question whether public four-year colleges have drifted away from their fundamental mission to provide a high quality undergraduate education for substantial number of citizens of the state. They call upon public institutions, especially four-year colleges and universities, to reexamine the fundamentals of their mission and relationship with state government. This relationship is based on an implicit social compact that binds them to the state. How well do they serve it? Should they seek to alter it? How should they advocate any alteration they might seek? Public universities also need to remember that they are sometimes perceived as too concerned about maintaining and advancing themselves in an academic status structure that emphasizes serving upper-tier undergraduate students, graduate students, and research. David Kirp (2003) warns that serving a social good is the only defensible basis for claiming a large public subsidy.

Frank Newman (2000) wrote that a significant part of the social compact is to admit and socialize young people from all economic and social strata and produce graduates with desired skills, competencies and oriented toward democratic citizenship. He is concerned that higher education preserve attributes essential to maintaining higher education's role as a servant of society. His Futures Project focused on three attributes: socializing students to take on their role in society; providing all citizens an opportunity for upward mobility through education, and upholding the university as a hope of unfettered discussion and research on critical subjects. Margaret Miller (2000) focuses more on intellectual, social and civic development of students and intellectual service to society. Pusser and Doane (2001) suggest the public subsidy should

continue to be defended by focusing on public benefits such as long term research connected to basic knowledge, community service, and liberal education. Pusser and Wolcott (in press) remind public institutions that their main purpose in institutional life is not simply to maximize revenue streams. Public institutions must provide significant service to society especially in those areas unaddressed by other institutions.

Overall, higher education administrative and faculty leaders have called upon public institutions to make the case that the public benefits of greater levels of educational attainment are high in terms of both economic productivity and tax revenue, about more leaders from diverse backgrounds and about greater civic engagement. Public institutions, they contend, must make a strong case that only public institutions are well placed to do a large part of what needs to be done. They are doing a good job on those things the public cares most about and they need more resources to continue to do that good. Public provision has historically done a large part of what needs to be done and needs to continue to do so (Miller, 2000; Morey, 2002; Newman, 2000; Newman and Couturier, 2001; Pusser and Doane, 2001; Pusser and Wolcott, in press).

But at the same time, both the for-profits and private nonprofit universities will provide competing cases that they provide significant public benefits. They assert that their sectors graduate at the bachelor's level proportionately more low income and minority students than do public institutions. The for-profit sector advances the argument that for-profit colleges produce a very large percentage of the graduates in high employer demand occupational areas. In the 2003 and 2004 Higher Education Act reauthorization debates over definition of the term "institution of higher education," the for-profit sector has minimized differences with other sectors. The for-profits have emphasized that they all serve students of the full demographic mix and especially those low-income students that Title III and Title V institutions serve (Moore, 2003). Private not-for-profit colleges contend that because of growing similarities between public and private not-for-profit institutions in serving low income and minority students, public universities no longer deserve a special status of a high subsidy and low tuition. Like private universities, public universities, it is argued, should operate on a high tuition/high aid model so the state can also afford to subsidize private not-for-profit institutions as well (Blaney, 2004).

Comparisons between the costs and benefits to the citizenry of the way that various sectors of higher education operate are difficult to evaluate. For-profit institutions highlight the fact that they are taxpayers

rather than tax users. Yet all higher education institutions that are eligible for federal and state student financial aids benefit from the fact that the students receive this aid; for many for-profit institutions this aid is by far the largest source of their institutional income. Another complexity is that many for-profit colleges do not pay the costs for some services for their students but rather let them be absorbed by others. One major example is library resources; many for-profit colleges direct their students to meet most of their library needs through local public libraries and other libraries of not-for-profit institutions. For-profit colleges typically do not compensate these libraries for these services.

More dangerous to public institutions would be states putting for-profit and private not-for-profit institutions in a direct provision role through directly funding student slots outside the public sector. The State of Washington legislature took initial steps to create new slots for students in designated high demand areas (engineering, mathematics education, and computer science) through direct provision by private not-for-profit institutions as a part of the FY 2005 appropriation process (Ammons, 2004) but the Governor vetoed the appropriation.

### *Adaptation*

The organizational behavior of for-profit institutions might be regarded as either a positive or negative example for senior public not-for-profit institutions. On the one hand, suggestions are made about what significant insights public institutions can draw from some of the positive experiences of for-profit institutions. On the other hand, observations are made on the extent to which the organizational behavior of public institutions is converging with some of the characteristics of for-profit colleges that traditional academics like least.

On the one hand, public institutions can draw useful insights from examining the experiences of for-profit colleges as one part of looking more closely at their own strengths and weaknesses. In concluding his lengthy study of for-profit colleges, Robert Ruch (2001 and 2003) called attention to three areas where he believed many public four-year non-research institutions could learn from for-profit colleges. These three areas are responding to market forces, developing a strong consumer orientation, and reformulating shared governance. Responding to market forces of employer and student demand requires overcoming historical resistances, inertia, and a decision-making structure that discourages timely decisions. Treating students like customers means being more

responsive to student needs not that students cease being students. The third is the most controversial and viewed with significant skepticism by traditional higher education — redefining shared governance to make it fit with a traditional management culture. Ruch recognizes that this redefinition is uncomfortable for faculty on most traditional campuses who view shared governance as fundamental to the educational enterprise. A significant level of participation and inclusiveness, he acknowledges, is still necessary for governance to work well in the for-profit management culture.

On the other hand, some analysts point out convergence between organizational aspects of public institutions and the characteristics of for-profit institutions that traditional academics like least. Brian Pusser and Sarah Turner (2004) identify five dimensions on which higher education institutions are undergoing transformations. First, public institutions draw a significantly lower percentage of their operating budget from regular state appropriations and an increasing amount through unsubsidized entrepreneurial services to new clientele. Second, program characteristics are becoming increasingly similar in those program areas where both sectors offer programs. Third, governance in public higher education institutions is handled in a less collegial manner than previously. Fourth, the faculty teaching role in public institutions is increasingly unbundled from the faculty research and public service roles and faculty authority over the curriculum and faculty appointments is being reduced. Fifth, many public institutional boards are less oriented toward the public purposes of the institution than had previously been the case.

#### COMMUNITY COLLEGES

The issues for community colleges regarding mission and state governmental relationships and regarding patterns of adaptation to best meet student needs are at least as complex as those for public senior institutions, if not more so.

##### *Mission*

Community colleges may have more difficulty deciding which activities are most central to their fundamental functions than do four-year colleges given the great multiplicity of missions community colleges serve. Part of the challenge is balancing activities in the liberal arts with occupational programming which is not uniformly recognized for transfer purposes. As Bailey (2003) notes, community colleges still adhere to

a traditional college model, an important factor that differentiates them from for-profits. That model causes them to think primarily about how they relate to public four-year institutions and to feel that that is their primary source of competition. Regionally accredited four-year for-profits are more visible to them than two-year for-profits and looked upon favorably. For example, it has been relatively easy for community colleges to develop an informal relationship with the University of Phoenix that benefits both parties. The University of Phoenix has historically admitted at the sixty hour level and therefore has channeled students with less than sixty semester hours and needing additional lower division liberal arts courses to community colleges to complete that work. Also, the University of Phoenix's definition of acceptable transfer credit includes some occupational courses that public four-year colleges have not articulated and therefore do not uniformly accept as transfer credit.

Community colleges, it has also been observed, do not look upon regionally accredited four-year for-profits that also offer two-year degrees as competition but as one evidence that a college can offer both two-year and four-year degrees. Community colleges have not generally paid a lot of attention to two-year for-profits that are typically not regionally accredited and that have a few large occupational programs many of which lead to certificates rather than degrees ("The contours of for-profit higher education," 2001). Community colleges do not in most instances need to be preoccupied with seeking enrollment growth when little if any new money is coming from the state to support that enrollment.

Many would argue that the open-door function of the community college is the most important function to maintain and strengthen — to serve non-traditional students who are disproportionately enrolled in occupational degree programs. Bailey (2003) sees a temptation to cater more to traditional age college students who need less remediation and support services. It is even possible that community colleges would be positioned to start selective enrollments in liberal arts transfer programs with the coming bulge in the traditional college age population in many states and to simultaneously phaseback occupational programs. If that is the case, Bailey argues that non-traditional students seeking occupational programs may have little choice but to turn to the for-profits. When the baby boom echo passes, however, and the community colleges start again to seek to serve the non-traditional student they may find the for-profits more firmly entrenched.

Critics are concerned about the possibility of some community colleges awarding the baccalaureate degree because they fear that adding another degree level would detract from the institutional mission to



provide broad access. In contrast, for-profit colleges do not need to worry about conflicting societal mandates and are better able to provide programs that combine two and four-year degree programs, regarded as an advantage by some community college students (“The contours of for-profit higher education,” 2001).

In some states with rapidly growing populations, legislators will strongly encourage community colleges that broach the possibility of offering four-year degrees. These legislators are motivated to serve their constituency that may have good access to a community college but little if any access to baccalaureate education. The push in that direction has been strongest in Florida with large urban populations seeking baccalaureate degree access. Four community college districts in Florida are authorized to award a baccalaureate degree and bills to give all districts that authority were moving toward passage in Spring 2004 in both houses of the Florida legislature (Peltier, 2004).

Spring 2004 Arizona developments displayed a confused state-level overview of the role of community colleges in achieving the state’s higher education goals and priorities. A bill was pending that would enable community colleges to offer baccalaureate degrees in four fields — teaching, law enforcement, fire science and nursing. In nursing, this might actually reduce the supply of nurses as apparently the associate degree entrance to Registered Nurse status would be removed with professional entry occurring with completion of the baccalaureate degree. Whether financing and governance of the baccalaureate degree offerings were primarily in the realm of the universities or community colleges was not directly addressed in the bill. All three public universities and the University of Phoenix opposed this proposal (Fisher, 2004).

State governments will need to decide the basic pattern of institutional missions for senior institutions and community colleges to better meet the educational needs of non-traditional students who have completed two years of college course work but lack geographic access to a baccalaureate degree. The most rational way to do this is to focus greater public college attention on this clientele. Public colleges in many states have responded in some fashion to that student demand but not to the extent necessary. Appropriations bills may well be the mechanism in many states to require greater reallocation of senior college resources in this direction.

The bottom line mission question that community colleges in areas of high population growth areas may face is whether they will seek authorization to award the baccalaureate degree. If they go that direction, two-year for-profit colleges may find an even greater opportunity to serve

non-traditional students in occupational programs. If authorized to award the baccalaureate degree, it may well be that community colleges would try to capture a four-year clientele similar to that served by the University of Phoenix baccalaureate programs. How students with two years of college credit would sort themselves out between community colleges awarding some four-year degree and for-profits operating essentially an upper division program would remain to be seen. The extent to which for-profit colleges would stay away from an area in which community colleges were authorized to offer four-year degrees would likely depend heavily on the specific fields in which these degrees were offered.

Overall, the debates about possibilities of community college baccalaureate degrees seem to be drawing community colleges to expend their most vital energies on a purpose that is not fundamental to the open access missions they have historically served. Surely, cooperative more equal partner undertakings between two and four year colleges to serve low-income urban clienteles would be more consistent with central mission commitments of both. Continuing with the Arizona example, the University of Northern Arizona had previously been designated by the Board of Regents to be the main distance education provider in the state and has programs in more than 20 locations in the state. NAU has also taken major articulation steps by setting up numerous "2 + 2 programs" where students can complete the two years of upper division classes via distance learning from NAU after doing two years of community college coursework (Slivka, 2004). Perhaps modifying the arrangement to involve a more equal partnership could better meet this need.

### *Adaptation*

Scholars making suggestions about what lessons community colleges might draw from the experiences of for-profit two-year institutions can draw upon detailed institutional case study comparisons of for-profit two-year institutions and community colleges. Significant studies focusing solely on regionally accredited campuses have been prepared by Bailey, Badway and Gumpert (2001) and by Deil-Amen and Rosenbaum (2003a and 2003b). Bailey, Badway, and Gumpert studied two campuses of a national chain and three community colleges located near those campuses examining missions, pedagogy, student services, flexibility of scheduling, selectivity, course sequencing and transfer. Deil-Amen and Rosenbaum examined seven community colleges and seven for-profit

institutions in urban and suburban Chicago focusing primarily on student services and relationships to employers for student and graduate placement.

Both studies found that for-profit institutions put greater emphasis on programs that lead to degrees or certificates and how various parts fit together than do community colleges. For-profit institutions made more use of laboratories and more consistently tie courses to practical applications. Student services, including, counseling and career placement were more fully developed and more integrated. Deil-Amen and Rosenbaum found counseling and student services at the for-profits much more structured than at community colleges. Students had fewer choices, were required to see counselors and student progress toward a credential was carefully tracked. Deil-Amen and Rosenbaum found that a more structured system works better for first-generation college students likely to have relatively few social and financial resources. Whereas community colleges generally seem confident that their reputation as colleges will communicate competencies of graduates to prospective employers, for-profits work directly to build employer relationships.

Bailey, Badway, and Gumpert (2001) identify an unanswered question from the literature on associate level instruction — how concerned are students that their studies culminate in the earning of a degree or other credential? Community college faculty say that even students taking occupationally oriented courses are more interested in learning specific skills and in general career exploration without necessarily earning a degree or other formal credential. At the same time, national student surveys show nearly all college students aspire to a college degree, at the bachelor's degree or higher. It seems in the short run that students like certificates and other credentials that can be earned quickly while at the same time aspiring to a bachelor's degree. Both studies conclude that for-profit institutions seem better for students who have made a clear career choice, because of the greater likelihood of leaving with a degree and also leveraging the beginning of a career. What lessons might community colleges take from the experience of for-profits to improve the effectiveness of their occupational programs? Both studies suggest that community colleges should provide more focused and coordinated student services and build closer business relationships for student and graduate placement.

Bailey, Badway and Gumpert (2001) suggest that an obstacle that community colleges face in strengthening support services lies in the fact that community colleges have a relatively large number of moderate enrollment programs. This contrasts with two-year for-profits which

typically have a few large programs. Therefore, while it is economically efficient for the for-profits to build student services within each program, community colleges will probably have to do more sharing of support services between programs. Bailey, Badway, and Gumport also make two suggestions for future research. Case study projects might examine organizational issues that facilitate and constrain how student services might be rearranged. Such studies would seek potential for centralized functions within larger organizations. A second line of research would examine possibilities of collaboration between community colleges and for-profit two-year colleges in the same community. This would include potential benefits and liabilities of emerging organizational arrangements such as subcontracting and outsourcing by the community college. Perspectives to be examined would include those of the students and both the community college and the two-year for-profit. Part of the study would be to reach understanding of how the unbundling of educational services creates new pathways for students to reach academic and career goals. It could also provide insights as to how students are best supported to take advantage of the full range of services of both community colleges and for-profit providers.

#### *Public Colleges — Summary*

Both public two-year and four-year colleges suffer from mission drift and need to engage in internal and external conversations aimed at a clearer consensus. They must know where they should be to serve fundamental societal needs so they can concentrate on getting there. Also, there is no shortage of advice given in the literature about areas in which the for-profit colleges are either a positive or negative example. We should continue to evaluate that advice.

### DIRECTIONS FOR FUTURE RESEARCH

As the literature on for-profit higher education matures, it has become more self-conscious about data problems and about institutional classifications. A topical area that deserves further examination is program effectiveness/student learning.

#### OVERCOMING DATA PROBLEMS

Researchers point out a number of fundamental flaws in the data that is available to them. Bailey, Badway, and Gumport (2001) and Kinser

(2003) present a detailed description of these problems. Both agree that the data provided by for-profit colleges for the Integrated Postsecondary Education Data System (IPEDS) is unreliable. Both also note wrong classifications of accreditation status and of profit versus not-for-profit status. Kinser notes that IPEDS can be accessed through three separate interfaces; each provided him a different list of regionally accredited for-profit institutions. Some for-profit institutions are entirely missing from the data set. Kinser then turned to the accreditors themselves; most accreditors do not provide information in their directories of accredited institutions about the for-profit or not-for-profit status of institutions. The information is also unavailable from the dataset maintained by the Council for Higher Education Accreditation. He requested lists of for-profit accredited institutions from each regional commission and received lists of varying quality; four of the eight lists from regional commissions needed to be revised. Although participation in IPEDS was voluntary in the past, as of the 2002–3 academic year, all Title IV institutional participants are required to participate in IPEDS (Knapp, Kelly, Whitmore, Wu, and Gallego, 2003, p. 1).

Bailey, Badway and Gumport (2001) conclude that a basis is lacking for more generalizable conclusions and more in-depth analysis based on national data to understand the educational and economic benefits to be derived by students from for-profit and not-for-profit higher education. They find that the sample size for the for-profit institutions in NCES data, as result of the small portion of total US enrollment the sector comprises, is too small to accurately reach any conclusion about these institutions.

#### INSTITUTIONAL TYPOLOGY

A classification system for two-year postsecondary institutions prepared for the National Center for Education Statistics (2001) simply divides for-profit postsecondary institutions into those whose awards include associate degrees and those that grant only certificates, calling the former “career connector institutions” and the latter “certificate institutions.”

Some general classification of the for-profit degree-granting universe has been done but without moving to the level of a typology. Kinser (2003) suggests that there may be important differences between the publicly traded and locally owned and between the single campus and the multi-campus institution. The Educational Commission of the States

(2001a) categorized for-profit colleges as enterprise colleges, supersystems, and internet-only. Hentschke (2003) uses the broad categories large publicly traded with revenues over \$100 million, privately held with revenue between \$50 and 100 million, and firms with operating revenues of less than \$50 million.

Most of the literature reviewed in this chapter has dealt primarily with the publicly owned large multi-campus multi-state systems. This is understandable due to their size and visibility. Most of these institutions also share a distinctive model specifically targeting non-traditional students, a managed rather than faculty overseen curriculum, reliance on mostly part-time faculty whose career experience is more important than their academic credentials, and an accelerated calendar.

Kinser is concerned about the fact that most of the literature is about just a few large institutions. He concludes that there is a need to look much more intensely at the remaining universe of for-profit colleges after removing the University of Phoenix and DeVry University because so little is known about the smaller institutions.

Perhaps the greatest disadvantage of looking primarily at a few large four-year institutions is that very little research has been done on two-year for-profit colleges to examine their operations and educational and economic outcomes in depth. These institutions which are heavily locally owned and emphasize hands-on technical learning are most likely to serve low-income educationally disadvantaged students. Many are regarded as providing a good educational experience and transition to career for students. The experience of students in this higher education subsector needs to be much better understood by traditional institutions.

#### PROGRAM EFFECTIVENESS/STUDENT LEARNING

A weakness of higher education practices generally in all higher education sectors is the absence of much direct examination of educational effectiveness. Generally, national accreditation focuses on student assessment more so than does regional accreditation and therefore for-profit colleges do more formal assessment than do not-for-profit institutions albeit with less complex learning objectives. But as the Educational Commission of the States (2001b) observes, neither for-profit colleges nor not-for-profit colleges provide information about the outcomes of education that can be compared across institutions. All institutions will continue to be challenged to provide more information about education outcomes.

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