MICHAEL BENJAMIN

THE QUALITY OF STUDENT LIFE:
TOWARD A COHERENT CONCEPTUALIZATION

ABSTRACT. Under various guises, the concept of the quality of student life (*QSL*) has received much attention in the higher education literature. Unfortunately, its various uses have in common that they all lack conceptual coherence. In an effort to remedy this situation, and render QSL useful for researchers, administrators and student services personnel, this paper does three things. First, a conceptual framework is used as a means of organizing a wide-ranging review of relevant literatures across several disciplines. Integration of the inferences derived yields a new formal definition of QSL. Next, building on a critique of four theoretical models of QSL, a new ecological formulation is advanced which stresses the need to consider various on- and off-campus contexts if efforts to assess student satisfaction and happiness are to be meaningful. Third, a number of salient methodological issues are examined in light of this formulation. To the extent that these approaches collectively yield a more coherent conceptualization of QSL, it is concluded that the idea of QSL deserves much greater prominence than it now enjoys.

INTRODUCTION

Ideas in higher education, like those in other areas of inquiry (Tweney and Doherty, 1982), rise and fall in prominence. The "quality of student life" (*QSL*) is one such notion. The late 1970s and early 1980s saw a string of articles on the topic (Austin, 1982; Brody and Hanson, 1979; Campbell *et al.*, 1980; Brown, 1982; Kuh, 1982; Pace, 1984). For almost the next decade, the literature was silent, interest in QSL having declined. The same decade, however, saw heightened interest in attrition (Tinto, 1987) and the rise of what some have called the "new accountability" (Ewell and Jones, 1991; see also Erwin, 1991; Ewell, 1988, 1991; Kells, 1991; Roberts and Clifton, 1991; Smith, 1991), with at least 40 American state jurisdictions, for example, now using some form of student outcome assessment (Task Force on University Accountability, 1993: 21).

Not coincidentally, the last several years have seen a renewed, even intense, interest in QSL covering a wide range of issues,[1] including the quality of:

(1) student experience (Center for Instructional Development, 1992; Clifton *et al.*, in press; Hendershott *et al.*, 1992; Roberts and Clifton, 1991, 1992a, 1992b; Shalinsky and Knapper, 1988), well-being (Michalos, 1991a, 1991b, 1993a, 1993b), effort (Kaufman and Creamer, 1992; Pace, 1990), housing (Lane, 1992), and community (Boyer, 1987);

(2) teaching (Center for Higher Education Studies, 1992; Goodwin and Stevens, 1993; Heichberger, 1991) and faculty-student relations (University of Texas [Austin], 1988);

(3) program standards (Braxton, 1991; CVCP, 1991; Hanson and Price, 1992; Pilot Quality Assessment, 1992) and quality assurance (Craft, 1992; Banta *et al.*, 1991; Butters *et al.*, 1991);

(4) institutional effectiveness (Finifter *et al.*, 1991; Kuh *et al.*, 1991; Levitz, 1992b; Ontario Council on University Affairs, 1992; Smith, 1991; Task Force on University Accountability, 1993; University of Strathclyde, 1992) and procedures for its assessment (Bogue and Saunders, 1992; Economic Council of Canada, 1992; MacLean's Magazine, 1991; Queen's University, 1992; Task Force on University Accountability, 1993: Appendix G; Webster, 1992);

(5) management of student services (Heverley, 1992; Keller, 1992; Seymour, 1992; Sherr and Tetter, 1991);

(6) the learning environment (Katz and West, 1992; Smith, 1990); and,

(7) higher education in general (Marshall *et al.*, 1991; Mayhew *et al.*, 1990).

The result is paradoxical. On the one hand, QSL seems intuitively appealing as a factor related to such important student outcomes as academic performance, time to graduation, student satisfaction, and institutional persistance (Mow and Nettles, 1990; Roberts and Clifton, 1991).[2] It may also be associated with other less obvious but equally important processes, such as classroom conduct, social relations, extra-curricular involvement, parent-student interaction, and roommate conflict.

On the other hand, to date, QSL has rarely been used in any of these ways. For example, the index to Erwin's (1991) monograph concerning

institutional assessment does not list any variant of QSL nor is it discussed in Ewell's (1988) review of the student outcomes literature. This does not seem unreasonable, for current ways of thinking about QSL are, at best, only weakly coherent (see Stull, 1987). A coherent notion would include: (1) a clear definition of the concept; (2) rationalization in the context of a theoretical model; and (3) concurrent indication of its measurement.

Virtually none of these components exist at present. Of the sources cited above, all but one assume a shared understanding of the term, and thus provide no formal definition. While Mayhew *et al.* (1990: 29) is the exception, their definition ("Quality undergraduate education consists in preparing learners through the use of words, numbers, and abstract concepts to understand, cope with, and positively influence the environment.") is not particularly useful; despite high quality instruction, students may still report feeling miserable (Nettles *et al.*, 1986). Further, with few exceptions (see below, 6.0), empirical studies have been driven by pragmatic concerns, and have thus been atheoretical. In turn, measurement efforts have, in the tradition of much higher education research (Stage and Russell, 1992), relied almost exclusively on survey methods, often importing instruments from studies of subjective well-being in adults, and thus with uncertain validity for student populations.

The following paper will address each of these deficiencies in turn. The main aim will be the development of a definition of QSL that is clear and coherent. In turn, this definition will be located within the context of a theoretical model of QSL. A handful of salient methodological issues will also be addressed. More generally, this paper will argue that knowledge of the contexts within which students operate is critical to the meaningful interpretation of student current reports of satisfaction and happiness at university. In turn, such an interpretation is of practical value to university administrators and managers, offering a strategic advantage to universities with a "high" QSL, while providing programmatic opportunities for targeted changes in cases of "low" QSL. Finally, throughout, the paper will rely on selective reviews of available literatures across a range of disciplines, although original data will be reported from a pilot study at the University of Guelph (Canada).

QSL: THE ELEMENTS OF A DEFINITION

The first step is to (1) identify and (2) integrate those elements necessary to a formal definition of QSL. Towards these ends, available ideas and information may be usefully organized in *six* categories, based on the interaction between *approach to inquiry* and *domain of inquiry*, as in Figure 1, below:

	Domain of Inquiry		
Approach to Inquiry	SOCIETAL	INSTITUTIONAL	STUDENT
OUTSIDER	1	3	5
INSIDER	2	4	6

Fig. 1. Conceptual framework for the study of QSL.

Thus, researchers may adopt either an outsider or an insider *approach to inquity*, a distinction that turns on *observability* (rather than measurement per se). Outsider approaches examine those aspects of a population that are directly observable and thus involve a minimum of inference, such as the number of students with an "A" grade. Insider approaches concentrate on those aspects of a population that are *not* directly observable, rely on respondent self-reports (of experience, perception and/or response) and thus involve considerable inference, such as reports of study satisfaction or dissatisfaction.

In contrast, as used here, *domain of inquiry* turns on two issues: *substantive domain* and the *intent of inquiry*. Studies in the "societal" domain do not directly concern higher education. Rather, such studies: recognize the sociological reality that students in higher education are necessarily embedded in a larger and more complex society; act to overcome the parochial character of much of the literature in higher education (Pascarella and Terenzini, 1991); and, provide data without which a thorough understanding of QSL would not be possible. Studies in the institutional or students domains are specific to higher education, but reflect divergent intents or agendas, the former concerning administrative and/or managerial matters, the latter concerning student perceptions. Taken together, they yield a "binocular vision" (Bateson, 1979: 70, 132), one in which the differences in perception add "depth" to our thinking about QSL.

More generally, studies in each category have something valuable to say about QSL, in turn supporting inferences whose integration will yield a formal definition of the concept.

1. *Outsider: Societal*

Interest in the incidence and prevalence of various objective states and conditions — that is, peoples "objective well-being" (Zautra and Goodhart, 1979) — dates at least to the middle of the 19th century and, with regard to disease, back to the ancient Greeks (Antonovsky, 1988). In the case of disease, for example, such efforts make *two* things abundantly clear: (1) illness is virtually ubiquitous in all human populations (Antonovsky, 1988), and (2) illness is *not* evenly or randomly distributed in those populations (Bronfenbrenner *et al.*, 1984; Schwartz and Link, 1991), with some groups systematically and consistently more prone than others to illness and other negative outcomes. The poor, for example, is perhaps *the* social group that has the received the most intense research scrutiny in this regard (Chalfant, 1985; Ryerse, 1990).

1.1. *Poverty.* Compared to their more affluent counterparts, lower-income individuals and families are more often ill (Anson, 1988; Avaro and Hanley, 19989; Williams and Kornblum, 1985) and have a shorter average life span (Blum *et al.*, 1988; Handal and Moore, 1987; Offord and Boyle, 1987; Weiner, 1981a, 1981b). Social class is also strongly associated with various forms of family disorder, including psychiatric disorder (Faris and Dunham, 1939; Hollinghead and Redlich, 1958) — especially schizophrenia (Kohn, 1972; Wheaton, 1983) and depression (Brown and Harris, 1978; Weissman and Myers, 1978) — as well as family violence (Connelly and Straus, 1992; Trickett *et al.*, 1991). Poor families are likely to differ from their more affluent counterparts in other ways as well. They are, for example, less likely to be stronged connected to supportive social networks (Argyle and Henderson, 1985). They are more likely to marry early (Lowe and Witt, 1984) but are subsequently more likely to separate and/or divorce (Ambert, 1990; Zinn and Eitzen, 1990). When employed, they are more likely to have jobs characterized by low intellectual flexibility and low substantive complexity (Kohn, 1983), and, in turn, are more likely to rely as

parents on punitive and instrumental disciplinary methods (Colon, 1980; Gecas, 1979; Hines, 1988; Newson and Newson, 1976). Further, their children (especially their daughters [Cohen, 1987]) are much less likely to aspire to higher education (Anisef *et al.*, 1986; Kohn, 1983; Sewell and Hauser, 1980; Smith, 1982), thus significantly limiting their life chances (McLanahan, 1992; Parsons, 1990) and creating a family life cycle much different than that of more affluent families (Colon, 1980; Fulmer, 1988).

On the basis of her review of the Canadian literature, Ryerse (1990: 4) draws the following conclusion likely applicable to all industrialized nations: "The quality of life is greatly diminished for those individuals and families who are denied access to basic requirements and opportunities in our society. They become powerless and alienated. The social structure of Canadian society, in this sense, 'excludes' poor people from full participation and citizenship."

1.2. *Inferences.* These data support a simple inference, namely, that objective circumstances are likely to play an important role in QSL, since variations in social status correspond to significant differences in individual attitudes, values, expectations, and aspirations as well as available resources and existing handicaps.

2. *Insider: Societal*

Discussion and research concerning subjective or intrapsychic responses to objective circumstances and events encompasses an immense literature whose thorough review is beyond the purview of this paper. Instead, *five* topic areas, selected for their relevance to QSL, will be briefly examined.

2.1. *Subjective Well-Being (SWB).* If, as noted above, concern with objective well-being dates back well over a century, concern with its subjective counterpart is much more recent, dating from about the mid-1960s and originating in the United States (Davis and Fine-Davis, 1991). Interest in SWB has subsequently spread around the world and currently represents a large and complex literature, although Andrews (1986) notes that government interest in the topic has recently de-

clined. Since the literature in question has been thoroughly reviewed elsewhere (Andrews & Robinson, 1991; Argyle, 1987; Diener, 1984; Larson, 1978; Michalos, 1986, 1993b; Strack *et al.*, 1991; Stull, 1987; Wheeler, 1991; Zautra and Goodhart, 1979), I will focus here on those observations about which there is substantial agreement and that are relevant to QSL, namely:

(1) SWB is a multidimensional concept in which cognitive (satis-faction) and affective (happiness) components can reliably be distinguished;[3] these components show substantial overlap, with Veenhoven (1984) estimating their intercorrelation at about +0.60;

(2) indicators of objective well-being are significantly related to SWB (Douthitt *et al.*, 1992; Inglehart and Rabier, 1986; Jackson *et al.*, 1986; Mullis, 1992), but only account for about 10%—15% of the variance; in contrast, between five and 15 specific life domains[4] account for 40%—60% of the variance in a simple additive model (Andrews and Robinson, 1991);

(3) all life domains, however, are not equally associated with SWB; rather, they distribute on a continuum (Andrews and Robinson, 1991; Argyle, 1987: 143), with those closest to self and family displaying the highest correlations (see Shapiro and Shapiro, 1983);

(4) SWB is also related to a series of psychosocial factors, such as stress and its management, self-esteem, social support and the perception of control over the situation (Abbey and Andrews, 1986; Gottlieb, 1987; House, 1986; House *et al.*, 1988; Sutton and Kahn, 1986); and,

(5) time is important, with SWB most influenced by negative events in the immediate past (Chamberlain and Zika, 1992; Ingelhart and Rabier, 1986; Landau, 1992); put differently, this is to suggest that short- (for example, less than six months) and long-term (for example, five years or more) measures appear to tap different aspects of SWB (Lazarus, 1991: 407).

2.2. *Stress.* The study of stress has come a long way since the seminal work of Selye in 1936. The result is a voluminous literature (for

reviews, see Goldberger and Breznitz, 1993; Hobfoll, 1988; Lazarus, 1991). While the literature involves many contentious issues, in relation to QSL there is one finding about which there is agreement: response to stressful life experience varies widely, primarily dependent on how such experiences are perceived, understood and interpreted — in short, what such experiences *mean* to the individuals in question (Lazarus, 1991: 10).

Thus, there is much natural and experimental evidence that across a group of individuals, exposure to the same objective event does *not* produce uniform physiological or psychological responses; rather, such responses vary widely as a function of how that event is perceived or interpreted (Frankenhauser, 1979). Similarly, events that vary widely in objective terms (from getting married to getting fired from a job) can produce virtually the same responses because they appear to have the same meanings for those involved (Frankenhauser, 1975a, 1975b; Mason, 1971). Such variation applies in the face of even major life stresses, such as combat or natural disaster (Green, 1982), although collapsing under stress is more likely here than under less severe conditions (Hobfoll and Walfisch, 1986).

Response to stressful events, then, is only partly a function of the events themselves; rather, it is largely related to what such events mean to the people involved, a complex process referred to in this literature as "appraisal" (Lazarus, 1991: 10; Lazarus and Folkman, 1987). In turn, the meaning systems which underpin appraisal processes are commonly thought to arise within the context of family patterns, personality characteristics, cognitive styles and life experiences, including the situational attributes of event(s) (Antonovsky, 1988: 132—137; Hobfoll, 1988; see Thomas and Duszynski, 1973) (see also below, 2.5).

In recognition of these processes the stress literature has been marked by increasing prominence of contextual models of stress (Cohen *et al.*, 1986; Dohrenwend *et al.*, 1993; Graig, 1993). Such models include concern for on-going life circumstances (such as the quality and extent of social support [Hobfoll and Vaux, 1993]), the character of life events (especially "daily hassles and uplifts" as opposed to major life events [Kanner *et al.*, 1981; Delongis *et al.*, 1982]), and personality attributes (such as "hardiness" [Kobasa, 1979; Ouellette, 1993] or "sense of coherence" [Antonovsky, 1988]).

2.3. *Valued life experience and euthanasia.* At first glance, "euthanasia" or doctor-assisted suicide, appears utterly removed from QSL. Closer examination suggests otherwise. The term "euthanasia" was coined by the Romans to refer to a "good death" in combat (Gillon, 1986). Having since fallen into disuse, it was resurrected in the late 19th century, and has become a controversial issue represented by a large literature (see Triche and Triche, 1975). A part of that literature is relevant to QSL, and is captured well in the following observation: "The prolongation of life becomes senseless, if that life has no value ... In my view the life of a human being has value if and only if he can have experiences which are valuable for himself. It is not important whether these experiences are simple and superficial, or complex and deep." (Musschenga, 1990: 84—85).

This suggests two things: first, it reaffirms the importance of individual meaning systems in the assessment of QSL; but, second, and more important, that the quality of an individual's life involves three considerations: the value that person attributes to the experiences they can have, the value they attribute to the experiences that they can *no longer* have, and the manner in which valuable past experiences heighten or intensify the current absence or loss of valued experience. With respect to QSL, this suggests that it should refer to: (1) a range of current life domains in terms of experiences seen as valuable or meaningful; (2) opportunities for valued experience across these domains that are restricted or entirely missing; and (3) the affect of valued past experiences, whether seen as positive or negative at the time, to shape perception of current experience.[5]

2.4. *Ethnicity.* Ethnicity is another area of study that encompasses a large body of work (for reviews, see Devore and Schlesinger, 1987; McGoldrick, 1982, 1988). Its relevance to QSL is again related to meaning. Membership in a given ethnic community — and we all belong to some such community — brings with it a shared system of meanings which potently shape how one perceives, interprets and interacts with the world (D'Andrade, 1984: 100; Segal *et al.*, 1966). Thus, variations in ethnicity correspond to variations in: the use of health services (Kleinman, 1983; Tseng and McDermott, 1981); child rearing methods (Colman, 1986; Miyake *et al.*, 1986); the psychological symptoms used

to express distress (Singer and Opler, 1956; Schwartz and Wiggins, 1986); and, even whether or not one is able to experience particular feelings in particular contexts (Averill, 1983). Ethnicity, then, represents a particular context which cannot fail to shape individual perceptions of life experience, including QSL (see below. 6.0).

2.5. *Meaning.* Membership in an ethnic community is only one of several social contexts which form our meaning systems, for without some system of meanings we would literally be unable to operate in the world (Berger and Luckmann, 1967; Luhmann, 1982; Schutz and Luckmann, 1973). Similarly, situations characterized as meaningless (anomie) or in which meanings become less and less coherent (alienation) are typically experienced as intensely aversive (Mitchell, 1988; Seeman, 1991).

Another context which supplies us with meanings with which to make sense of experience is that of society-at-large (Berger and Luckmann, 1967; Gergen, 1985; Hochschild, 1979). In effect, through our experience in various societal institutions, including the family and the school system, society presents its members with a rich array of implicit but consensually understood rules of feeling and action. Ranging from modes of conduct in public places (in North America, strangers pass each other on the right) to appropriate feelings between persons that differ in status (such as professors and students), members of every society are embued from birth with an extraordinary variety of meanings that define any given culture and are taken for granted by its members. In turn, they typically regard such meanings as objective features of the world rather than a social construction of their society. Moreover, these meanings or rules vary, not only by ethnicity, but also by class, age and gender (Csikszentmihalyi and Rochberg-Halton, 1981: 106).

Much the same might be said about family meaning systems (Breunlin, 1989), Indeed, Berger and Kellner (1964) argue that the creation of shared meaning system is a necessary part of any dyadic relationship, while Denzin (1984: 54, 131) makes nearly the same point regarding the experience of emotions. Similarly, Schwartz and Wiggins, following Luhmann (1982; see Bednarz, 1984) and Engel (1977), argue that in all social systems, "meaning-structures" provide members with the

critical means to be selective in responding to extraordinary environ-
mental complexity. Thus, how to behave and/or what to feel in any
given situation appears profoundly related to the meaning system of the
people in that context. Empirical evidence supportive of such a view
has been reported by various researchers (see Reiss, 1981, 1989;
Shapiro and Shapiro, 1983; Thomas and Duszvnski, 1973).

Thus, at the level of society, of the community and of the family,[6]
reality is socially constructed (Gergen, 1985). Even so, following
Csikszentmihalyi (1988a), this does not deny that individuals may
consciously choose to contradict conventional forces. Studies of prac-
tical intelligence, for example, demonstrate how individuals may choose
to deviate in order to exploit an unusual talent (Sternberg and Wagner,
1986). Similarly, Geulen's (1986) "switch point" model of human
development highlights the active response of individuals to change
events. That said, the facts suggest that most people chose to live within
conventional rules most of the time (Mitchell, 1988). There is every
reason to believe that this is as true for university students as for other
adults, and thus that the particular meaning systems they bring with
them will significantly affect their QSL.

2.6. *Inferences.* This wide-ranging exploration across a range of litera-
tures supports a short series of inferences regarding QSL. First, QSL
will involve both cognitive and affective components. Second, it will be
most useful when referring to current experiences rather than events in
the far past, although the latter may well affect the interpretation of the
former. Third, it will need to differentiate between various life domains,
not merely those on campus. Fourth, it will also need to distinguish
between valued experiences perceived as present as well as those seen
as meaningfully absent. Finally, QSL should be concerned with the
various context with which students typically operate. Their objective
circumstances, noted above (1.2), is one such context. Another con-
cerns a range of potentially stressful life events, while a third context
concerns their "meaning structures", that is, personal or idiosyncratic,
interpersonal (associated with family, friends, romantic partners, and
others), community (associated with ethnicity); and, societal (associated
with social class, age and gender).

3. *Outsider: Institutional*

Institutions of higher education necessarily seek to achieve at least two goals. First, they seek to change students (Weidman, 1989) on several levels: their values (for example, respect for academic knowledge), attitudes (for example, respect for cultural diversity and individual differences), store of knowledge (for example, in chemistry), and patterns of thought (for example, critical thinking). Indicators of success in this objective include graduation rates and academic grades. Second, colleges and universities wish to compete successfully for a share of the student population, and to retain the students who initially enrol. Relevant indicators include "market share" (Solomon and La Porte, 1986), application rates and attrition rates.

This concern with competing successfully, coupled with the "new accountability" (Ewell and Jones, 1991), explains an emphasis in the institutional literature on measurement procedures, performance indicators (Hanson and Price, 1992; Levitz, 1992b) and comparative institutional ranking (Webster, 1992). It also explains organizational mechanisms geared to sorting and selecting eligible students, for example, Clark's (1960, 1980) "cooling-out function". However, most germane to QSL will be data concerning the dual outcomes of performance and retention.

3.1. *Performance.* The grading system constitutes the main currency used by universities to recognize and reward the academic conduct of their students (Becker *et al.*, 1968). It follows that research interest in predictors of undergraduate academic performance has been longstanding (Mathiasen, 1984). However, two very different approaches to performance can be identified.

As the review by Mathiasen (1984) makes clear, researchers in higher education have sought to explain student performance almost entirely in terms of an array of undimensional indicators (Stage, 1989). These have included indicators associated with students (personality, study habits, social skills) (Bauer, 1992; Kinney and Miller, 1988; Capella *et al.*, 1982), grading systems (high school grades, university GPA) (Aleamoni and Oboler, 1978; Allan *et al.*, 1983), testing procedures (University entrance examination scores) (Noble and Sawyer,

1989) and/or living environments (residence life) (Blimling, 1989). More recently, multidimensional studies have emphasized the predictive value of student typologies (Pedrini *et al.*, 1984; Stage, 1988, 1989).

The alternative approach used by researchers in sociology (Becker *et al.*, 1968; Meyers, 1979; Lewis, 1984; see Pike, 1981) has emphasized the organizational context of student efforts. By placing so much emphasis on grades, the institution induces students to approach education strategically, focusing on maximizing their GPA at the expense of the quality and depth of their learning. In particular, students strive hard to decipher and manipulate the "hidden curriculum", a term coined by Synder (1966, 1971) to describe the implicit assumptions, rules and cues faculty use as their basis for assigning grades. In practice, this differentiates among students on grounds other than academic competence, as some students are "cue-consciousness" while others are "cue-seekers" or even "cue-deaf" (Miller and Parlett, 1976).

This and other components of academic performance are strongly related to social class (Carnoy, 1974; Bowles, 1977 Levine and Havighurst, 1984 Colclough and Beck, 1986). Not only are students from lower as opposed to higher-income families much less likely to aspire to higher education, but holding ability constant, they achieve lower grades in high school and acquire fewer academic skills (Rossides, 1976). Low-income students are thus less likely to gain admission to university (Baird, 1984; Cookson and Persell, 1985), in part because they are more likely to enter by way of "contest" rather than "sponsor[ship]" (Babbit and Burback, 1985). Further, those that do gain admission typically come less academically and socially prepared for university, and so do less well, both in attainment and achievement. In the words of Parelius and Parelius (1987: 265), "Whatever the measure, however, socioeconomic status is positively correlated with both educational attainment and achievement: The higher a student's socioeconomic status, the greater his or her educational accomplishment is likely to be."

One explanation of these differences in outcome concerns differences in family socialization (Bourdieu, 1977; Persell *et al.*, 1992; Zweigenhaft, 1993). Affluent students have the benefit of their parent's wealth ("economic capital") as well as their knowledge, dispositions,

skills ("cultural capital") and connections ("social capital"). Less privileged students have no such advantages. For these students, entering university means not only struggling with a difficult curriculum, but seeking to join a foreign culture, with success often at the cost of alienation from family and friends (Baker, 1989), and sometimes psychological crisis (Baker, 1989; Held and Bellows, 1983; see Benjamin, 1988a).

3.2. *Attrition*. Attrition is a second institutional concern that has garnered great interest (for reviews, see Beatty-Guenter, 1992; Noel *et al.*, 1985; Guppy and Bednarski, 1992). At present, there is no consensus in the literature concerning a definitive model of attrition (Clotfelter *et al.*, 1991). However, Billson and Brooks Terry's (1987) approach is particularly useful here. By distinguishing between eight stages in student's college career, they make three things clear: (1) attrition is related to time, the risk of leaving declining with duration of enrolment in a give institution; (2) attribution is commonly associated with multiple sources of student dissatisfaction (see below, 4.1), and thus appears crudely related to QSL; and (3) some students are at greater risk of attrition than others.

With regard to the last point, much of the research in this area (Astin, 1984; Astin *et al.*, 1987; Tinto, 1987) is psychological in character, emphasizing student response to the university environment (for example, boredom versus excitement) and especially their degree of social and academic integration. In contrast, other research explores variables related to social class, placing first generation (Billson and Terry, 1982; Brooks Terry, 1988), and Black and Hispanic (but not White or Asian) students at higher risk of attrition (Alexander *et al.*, 1982; Mow and Nettles, 1990; Nagasawa and Espinsosa, 1992; Nieve and Valle, 1982; Ong, 1989; Terrell and Wright, 1988; Tierney, 1992a, 1992b, in press). While it is certainly possible to think about these group's higher risk of attrition in terms of some deficit in their "integration" or "involvement", class-based differences in culture is, in Tierney's (1992b) judgment, a fairer assessment.

3.3. *Inferences*. The relevance of these data to QSL is threefold. First, they affirm the role of objective circumstances in the experience of

students in higher education. While studies of subjective well-being, examined above (2.1), suggest that social class should explain only a small portion of the variance, thinking about class in cultural terms — as associated with a range of attitudes, values, aspirations and assumptions — makes this an empirical matter. Second, these data begin to flesh out the academic domain and highlight the importance of grades. Third, and most important, these data emphasize yet another context which may shape student perceptions but in ways that are typically invisible to them (Benjamin, 1990), namely, the university as complex organization. While this aspect of the institution has previously been noted (Birnbaum, 1988; Kuh, 1989), it is more typically ignored in the literature (Kuh, 1989), a fact that is especially unfortunate since universities presumably vary in the extent to which their organizational influence is positive or otherwise (Kuh *et al.*, 1991).

4. *Insider: Institutional*

Studies in this section reflect an insider perspective insofar as they depend on the self-reported responses of individual students. They are institutional in that issues and response categories are selected *a priori*, without student input, and the results used to serve institutional agendas. To the extent that such agendas, however benign, may diverge from student concerns, such studies may be described as "adultocentric" (Benjamin, 1990).

Of the many topics that might be examined, discussion will focus on only one, student satisfaction, because of its dual salience to subjective well-being (2.1) and higher education. Indeed, Astin (1977: 164) observes that ". . . it is difficult to argue that student satisfaction can be legitimately subordinated to any other educational outcome."

4.1. *Student satisfaction*. Three aspects of this literature (for reviews, see Bean and Bradley, 1986; DeVore, 1983; Pascarelli and Terrenzini, 1991) and relevant to QSL. First, unlike studies of subjective well-being in which it is seen as a cognitive variable, in higher education student satisfaction ("a pleasurable emotional state resulting from a person's enactment of the role of being a student" [Bean and Bradley, 1986: 398]) is explicitly seen as an affective variable (cf. Knox *et al.*, 1992).

Moreover, it is left unclear how satisfaction is to be distinguished from related variables, such as "happiness", also defined in affective terms (see Booth *et al.*, 1992).

Second, satisfaction, treated as a dependent variable, is correlated with a host of independent measures, including: gender (Light, 1990, 1992); quality of academic effort (Kaufman and Creamer, 1992; Pace, 1984, 1990); educational attainment (Witter *et al.*, 1984); the quality of learning (Remsden and Entwhistle, 1981); the nature of the curriculum (Hendel, 1985); the level of psychological distress (Benjamin *et al.*, 1986); various ". . . characteristics of the institution and the student's involvement in the institutional environment." (Astin, 1977: 168); student-faculty interaction (University of Texas (Austin), 1988); adjustment and social support at university (Robbins *et al.*, 1993); and living arrangement, that is, living on- or off-campus (Benjamin, 1988b).

Finally, Bean and Bradley (1886: 393) argue that satisfaction ". . . as a substantive area of investigation has received scant attention over the past decade . . ." This is not especially surprising. While much of the research in psychology and educational sociology *uses* student respondents, its adultocentric character also means that it is only rarely seen as being *about* student experience. Two exceptions are the work of Bean and Bradley (1986) and Knox *el al* (1992). The former found that among women only, satisfaction and grades were reciprocally related. However, students achieved good grades because they were satisfied, *not* satisfied because they received good grades. In turn, their satisfaction was most strongly related with the degree to which they felt they belonged at the university they were attending. Knox *et al.* (1992), who focused on "academic satisfaction", found that it was weakly related to college characteristics and student gender, and strongly related to student experience (especially grades and residence living) and educational attainment.

4.2. *Inferences*. These data are relevant to QSL in three ways. First, they help flesh out those domains especially relevant to students, including social relations, student-faculty relations, academic experience, and living arrangements. Second, they leave ambiguous the matter of whether student satisfaction should be viewed as a cognitive or an affective variable, and call attention to a related issue, namely, whether

psychological stress should be included and, if so, whether, it should be examined globally or only in relation to specific domains. Finally, it confirms that satisfaction appears to be an important facet of QSL, just as it was central to subjective well-being.

That said a caveat is in order having to do with student development. University education is deliberately intended to promote and enhance student development (Boyer, 1987), and there is good evidence that it does so, albeit in qualitatively different forms for men and women (Baxter Magolda, 1992). In this context, Csikszentmihalyi (1988b: 377) suggests that satisfaction may be a problematic indicator of QSL, for "... just being satisfied with current conditions cannot be a good indicator of positive experience in the long run. Optimal experience requires increasing challenges and the development of skills apace. Life is meaningful only when people feel that the psychic energy they expend in the course of daily life strengthens their growth. Growth must be factored into the question of a good life." I will return to this issue in later sections (6.0, methods).

5. Outsider: Student

Studies in this and a previous section (3.0) are both concerned with institutional competition for student and other resources. The two sections are different in that those in the present section are more concerned with student attributes and management practices.

5.1. *Student attributes.* Successful competition among institutions depends, in part, on student enrolment, while subsequent policy and practice concerns student attributes. Studies in both areas suggest that the student population in higher education is changing. Over the past decade, for example, students entering higher education across North America are gradually getting older, include an increasing proportion of females, and involve a changing ethnic mix, that is, a stable majority of Whites, an increasing proportion of Asians (especially Chinese, Japanese and Koreans [Endo 1990], and a decreasing proportion of Blacks, Hispanics and Native Indians (Finifter *et al.*, 1991; Levine *et al.*, 1989; Levitz, 1992a; Managan, 1992; Mow and Nettles, 1990; Nettles, 1990; Terrell and Wright, 1988). Such changes provide support for typo-

logical approaches to understanding college student behavior and outcomes (Astin, 1993; Carter and Parks, 1992; Stages, 1989).

5.2. *Management practices.* Such changes raise important questions about how institutions might best respond. One approach that has recently received increasing attention is that of Total Quality Management (TQM) (Heverly, 1992; Keller, 1992; Seymour, 1992; Sheer and Teeter, 1991). TQM is basically a technology for continuously monitoring and improving the quality of service to students, including registration, payroll, freshman orientation, building maintenance, garbage collection and housing assignment. To date, a number of American and Canadian universities have had some experience with TQM, with mixed results.

5.3. *Inferences.* These data have been reviewed very briefly since their contribution to QSL are modest. They reaffirm the importance of both objective circumstances and the institution as a complex organization. Perhaps they are most valuable for a linkage that is here only implied and which is absent from the subjective well-being literature, namely, the relationship between QSL and the quality of life of other non-student groups on campus. The fact that managers and administrators struggle to provide service while responding to changing demands from a changing student population has clear implications about *their* quality of life, and speaks indirectly to the experiences of faculty and other staff. Indeed, Clark and Lewis (1988: 282) have recently observed that "Significant . . . changes in society have affected the academic profession . . . adversely, resulting in a perceived current and increasingly problematic decline in faculty vitality.", the latter defined in terms of faculty satisfaction and morale. In this context, it seems reasonable to speculate that the quality of life of institutional staff cannot fail to impact on QSL, with the relationship between the two likely a reciprocal one. I will return to this issue in later sections (6.2, theory).

6. *Insider: Student*

This final section will briefly summarize the literature explicitly concerned with QSL, including a pilot study at the University of Guelph (Canada), and a handful of related studies. The fact that there are few

studies to be discussed here should come as no surprise in light of
Moffat's (1991: 44—45) observation that," . . . contemporary outside-
the-classroom college [life] . . . is almost entirely ignored in serious
research on American colleges and universities."

6.1. *Quality of student life.* The handful of studies of QSL (Brody and
Hanson, 1979; Campbell *et al.*, 1980; Center for Instructional Devel-
opment, 1992; Clifton *et al.*, in press; Hendershott *et al.*, 1992;
Michalos, 1991a, 1991b, 1993a, 1993b; Roberts and Clifton, 1991,
1992a, 1992b; Shalinsky and Knapper, 1988; University of Texas
[Austin], 1988)[7] may be characterized in terms of five observations:
    First, the majority of available studies are purely descriptive, while
the remainder are theoretically based. However, compared to the
theoretical character of much of the literature on student outcomes
(Pascarella and Terenzini, 1991), the theoretical emphasis among QSL
studies is unusual.
    Second, most studies distinguish between various domains. Hender-
shott *et al.* (1992), for example, recognize five domains (academic,
social, housing, student services and friendship) while Michalos (1993b)
recognizes 12 (health, finances, family, job, friends, housing, partner,
recreation, religion, self-esteem, transport, education). In most cases,
choice of domains is based on either intuition (Hendershott, personal
communication, 1993) or previous research in subjective well-being
(Michalos, 1993b). Campbell *et al.* (1980) and Roberts and Clifton
(1991) are exceptions, having derived theirs based on theory. Further,
they argue that, ". . . in assessing the quality of student life, it is
reasonable to focus on the domains that the institution is attempting to
promote."
    Third, most of the studies cited above have used satisfaction as a
cognitive variable, the remainder having failed to address this issue
explicitly. While Michalos (1993b) and Roberts and Clifton (1991), in
the tradition of subjective well-being, distinguish between life satisfac-
tion and happiness, the remainder focus exclusively on satisfaction.
Hendershott *et al.* (1992), however, differentiate between global satis-
faction and two variations based on semantic differential questions
("interesting-boring" and "rewarding-disappointing"). In a similar vein,
Brody and Hanson (1979) explore satisfaction in terms of both per-
ceptual (evaluative) and behavioral (frequency) indicators.

Fourth, all studies included some demographic information, while most focused exclusively on student experience on campus. Campbell *et al.* (1980) and Michalos (1993b) were exceptions, exploring off-campus domains. Campbell *et al.* (1980) are unusual in another way, having included information on psychosocial factors, including stress and the respondent's stage in the process of transition to the university.

Finally, in nearly all studies cited, the majority of the students were satisfied with their university experience; the study by Roberts and Clifron (Roberts, personal communication, 1993) was an exception, the majority of their respondents (in the Faculty of Education) reporting high levels of alienation (see Clifton *et al.*). However, results varied across domains. Of the five domains examined by Hendershott *et al.* (1991), two, student services and housing, were unrelated to satisfaction. Brody and Hanson (1979) reported that their method of measuring satisfaction was reliable but that perceptual and behavioral measures were poorly correlated. Similarly, Roberts and Clifton (1991) found that while their affective scales generalized well, their cognitive scales were only applicable to education students.[8] Campbell *et al.* (1980) found that student satisfaction was significantly related to stress (life events) and academic performance, and further varied by student type based both on their position in the transition process and their pattern of time use. Finally, both Hendershott *et al.* (1992) and Michalos (1993b) note that women were slightly more positive than men, while the former study found that among women about half of the effect was indirect based on their experience in the social and academic domains.

6.2. *University of Guleph (Canada)*. In an effort to examine the QSL of students at the University of Guelph, Brian Pettigrew, Peggy Patterson and myself conducted a pilot study whose primary focus was construction of a taxonomy of student life domains and subdomains relevant to QSL. Accordingly, through the period October, 1992 to February, 1993, five focus groups were convened, organized around the question, "What sorts of things do you think affect your quality of life as students at the University of Guelph?".[9] Four of these groups involve a total of 26 undergraduate students, the majority of them female and on average 20 years of age. Of these, three groups involved undergraduates in either arts or science, while the fourth involved students enroled in a

professional program (veterinary medicine). The fifth group consisted
of 10 faculty members (predominately male) most of whom were
recipients of a national prize for teaching excellence.[10]

The results may be summarized as follows:

First, context analysis of students responses indicated (see Figure 2)
that QSL was related to nine major life domains and 66 subdomains;
specific variables mentioned totaled well over 300. Consistent with
Campbell *et al.* (1980), this included both on-campus and off-campus
life domains, including subdomains indicating the salience of both stress
and transition (both entry and exit).

Second, and particularly noteworthy was consistent mention of a
subdomain we called "link", that is, none of these life domains operated
independently. Rather, evidence suggested high levels of interaction,
both across domains as well as within domains. For example, student
finances and parent-student relations were linked, since parents often
paid much or all of their son or daughter's costs while at university.
Consequently, the extent to which parent-student relations were cordial
or conflictual had a direct bearing on student finances. Indeed, several
students stressed that their abject poverty derived from the fact that
they absolutely refused to accept parental financial support, either due
to on-going conflict or as a symbolic expression of their adult inde-
pendence. Their poverty negatively affected their academic work.
Conversely, several professional students noted their on-going financial
dependence on this parents, a status about which they felt ambivalent
but which was unavoidable given the high costs associated with their
program. As for within-domain interaction, most respondents noted, for
example, that workload varied considerably as a function of the interac-
tion between year and program of study, the quality of instruction,
faculty accessibility outside of the classroom, and the quality of avail-
able facilities. Virtually identical findings concerning "link" were a
prominent part of a recent study of entering students at the University
of Guelph based on daily diaries (Benjamin, 1990).

Third, entering and graduating students, in particular, noted the
absence of experience as impacting on their QSL. Entering students,
especially females, for example, suffered from the daily absence of their
parents, especially their mothers. (Similarly, Hanson (personal commu-
nication, 1993), at the University of Texas (Austin), reports that each
year several Hispanic female students suffer homesickness of such

1. Social

   — Parents/Family
   — Friends
   — Romantic Partner
   — Support/Acceptance
   — Demand/Conflict
   — Other
   — Link (*)

2. Finances

   — Employment
   — Options
   — Awards/Scholarship
   — Other
   — Link (*)

3. Individual

   — Identity
   — Motivation/Aspiration
   — Values
   — Attitudes
   — Self-Esteem/Confidence
   — Stress/Pressure
   — Background/Experience
   — Vocational Goals
   — Other
   — Link (*)

4. Living Arrangements

   — Advantages
   — Disadvantages
   — Structure
   — Gender Mix
   — Maturation
   — Location
   — Group Membership
   — Other
   — Link (*)

5. Academic

   — Workload
   — Faculty/TAs
   — Grades/Evaluation
   — Structure
   — Program
   — Level/Year
   — Facilities/Equipment
   — Affective Response/Time
   — Skill/Knowledge
   — Professional School (**)
   — Time Use/Management
   — Other
   — Link (*)

6. University Services

   — Access
   — Utility
   — Extracurricular
   — Other
   — Link (*)

7. Gender

   — Safety/Security
   — Difference
   — Role Models
   — Other
   — Link (*)

8. University Administration

   — Courses
   — Bureaucracy
   — Complexity
   — Student Organizations
   — Scheduling
   — Other
   — Link (*)

9. Other

   — Health
   — Situation
   — Adjustment/Entry/Exit
   — Other
   — Link (*)

* Identifies a link between two or more life domains/subdomains.
** Refers to a range of differences between "regular" undergraduates and those in a Professional School.

Fig. 2. Life domains and major subdomains among undergraduate students.

severity as to require temporary hospitalization.) In contrast, graduating students complained of the absence of programs designed to ease their transition into the work world.

Finally, comparison of student and faculty responses highlight a sharp and consistent difference in perspective between the two groups. Only about a third of all faculty responses resembled those of undergraduate students. Faculty responses differed in their concern for such things as: faculty rewards and incentives; faculty class size preferences; administrative impediments; government education policy; student feedback to faculty; student classroom misconduct; and, departmental politics (especially, the role of chairperson). In short, faculty responses appear to reflect *faculty* quality of life. That faculty quality of life affects their teaching practices, career plans, and collegial relations, respondents lift no doubt. How it many impact on student's QSL remains unclear; as the above review (6.1) makes clear, I know of no empirical study of this matter.

6.3. *Related studies*. Finally, a handful of studies touch on related issues. One example involves a series of studies by Csikszentmihalyi and his colleagues (Csikszentmihalyi and Csikszentmihalyi, 1988; Csikszentmihalyi and Larson, 1984; Csikszentmihalyi and Rochberg-Halton, 1981) concerning "flow", a term their respondents often used to describe what it felt like to engage in an activity that they experienced as intensely pleasurable. These studies showed that: (1) flow is characterized by a balance between high levels of skill and challenge, with both necessarily increasing if flow is to be maintained; (2) among high school students, one course out of every five includes the experience of "flow", although, "In a typical 50-minute high school lecture, the average student is awake, staring more or less eagerly at the teacher who is passing on the information, yet at least half the time the student is not really thinking about anything remotely related to the lecture or to the subject matter. Typical thoughts in the classroom cover the weather outside, prospects for the weekend, and the state of one's digestive system." (Csikszentmihalyi and Larson, 1984: 257); (3) flow is strongly associated with academic achievement (both grades, and the quality of the work) holding student ability (GPA) constant; (4) flow, academic achievement and family life are all interrelated; and (5) flow

necessarily involves an activity in which individuals engage on a voluntary basis, including the perception that they, and they alone, control their own behavior.

Other related studies are qualitative, and thus still rather rare in the higher education literature (Manning, 1992). Komarovsky (1985), for example, demonstrates the on-going importance of the relationship between students and their parents (for a review, see Benjamin, 1988a). Baxter Magolda (1992) shows that females and males think in systematically different ways although they tend to converge in their final year in university. Finally, Holland and Eisenhart (1990) highlight the salience of romantic relations for college women and how such relations, along with other processes, discourage women from an academic career in science.

6.4. *Inferences.* These data are helpful in a number of ways. First, Roberts and Clifton's (1991) objection notwithstanding, these data make clear that a variety of domains need to be distinguished, both on and off campus. Second, they reaffirm the importance of time, with the accent on student perceptions of current experience. Finally, they raise a series of theoretical and methodological issues to be addressed in later sections.

7. *QSL: A Formal Definition*

The foregoing discussion of literatures across a range of disciplines suggests that QSL involves at least 8 distinct facets or components:

(1) satisfaction (cognitive)
(2) happiness (affective)
(3) multiple life domains (on and off campus)
(4) short-term past
(5) objective circumstances (context 1)
(6) institutional circumstances (context 2)
(7) psychosocial factors (context 3)
(8) meaning structures (context 4)

Taken together, this is to suggest that QSL may be formally defined as:

Student short-term perception of satisfaction and happiness with multiple life domains
in light of salient psychosocial and contextual factors, and personal meaning structures.

The time frame would focus on the immediate past, say, the past
two weeks. Recognized life domains would be those cited in Figure 2
(above), although this list is seen as open-ended. Objective circum-
stances would include a range of demographic indicators, including age,
gender, social class and ethnicity, as well as indicators of current
physical health. Similarly, institutional circumstances would include
indicators such as academic year, program, number of courses, and so
on. Psychosocial factors would distinguish between situational events
(stress) and prevailing emotional states (depression, anxiety). Finally,
personal meaning structures would include: prevailing family interaction
patterns; student goals and expectations; and, student identity, espe-
cially self-esteem and self-perception of competence.

This is a complex formulation, and is not fully intelligible without
first being placed in theoretical and methodological contexts. It is to
these contexts that I turn next.

QSL: THEORETICAL REFORMULATION

Research in subjective well-being is necessarily embedded in a theo-
retical context (if not necessarily reflecting a formal theory [Michalos,
1986]). Indeed, it could *not* be otherwise, for as Bateson (1977)
explains, "All descriptions are based on theories of how to make
descriptions. You cannot claim to have no epistemology. Those who so
claim have nothing but a bad epistemology. And every description is
based upon, and contains implicitly, a theory of how to describe."

In this context, SWB research involves a variety of theoretical
models. Zautra and Goodhart (1979), for example, list five theories,
while Diener (1984) identifies seven (see Headley *et al.*, 1991).
Detailed exploration of each of these models is beyond the purview of
this paper, both in terms of space and because there is good reason to
believe that models of SWB and QSL need not be identical. Instead,
two classes of theory (exclusionary and inclusionary perspectives) will
be distinguished, two models briefly examined in each class, then an
alternate inclusionary model of QSL advanced.

Exclusion and inclusion. Proponents of exclusionary theories[11] search for universal mechanisms, insist on the use of objective data gathering methods, and adopt an "either/or" approach to the selection of variables, that is, they recognize a single unit of analysis and focus on a very narrow band of explanatory variables.

In contrast, proponents of inclusionary theories argue that all phenomena necessarily operate within a specific context, and that theories which disregard contextual matters are, at best, incomplete. Similarly, they recognize the legitimacy of both qualitative and quantitative methods, and stress that key features of all social phenomena only emerge through the interaction between levels (individual, family, community, society). In turn, this means that at best prediction can only be probabilistic. Accordingly, proponents typically adopt a "both/and" approach, recognizing multiple units of analysis and including a broad range of explanatory variables.

QSL: exclusionary models. Two models of QSL are exclusionary in the above sense: Michalos's (1985, 1986, 1991a, 1991b, 1993a, 1993b) multiple discrepancies theory, and Roberts and Clifton's (1991, 1992a, 1992b) academic challenge/support theory.

Michalos. Multiple discrepancies theory is a cogitive model which rests on the premise that a universal human attribute is the tendency to continuously compare one's current situation against some set of ideals, for example, one's aspirations, what one considers ideal, what one expects to be the case, the best one has achieved in the past, what one believes is true of one's reference group, and so on.[12] Subjective well-being is thus determined on the basis of the gap or discrepancy between the real and the ideal: positive if the gap is small, closing or non-existent, negative if the gap is large or growing. Using a convenience sample of over 17,000 undergraduate students in 39 countries, demographic variables together with seven "discrepancy" variables were able to account for 50% of the variance in student life satisfaction, although this varied (44%–71%) across life domains.

The strengths of this model are its specificity and simplicity. These advantages notwithstanding, the model still fails to account for various psychosocial factors (House, 1986; Stull, 1987), the determinants of

and variations in aspiration (Abbey and Andrews, 1986) and the affec-
tive processes which contribute to subjective well-being (Lazarus,
1991). More generally, it is the acontextual character of the model that
renders it incomplete; it says that students make cognitive comparisons
— an observation that has intuitive appeal — but it does not say why
they do so, what determines variation in the meaning attributed to such
comparisons, whether any other psychological or behavioral processes
play a role in their subjective well-being and, if so, what that role might
be.

Roberts and Clifton. The authors seek to elaborate a model of academic
performance familiar in higher education, namely, the balance of chal-
lenge and support (Rogers, 1980; Sanford, 1962; Widick and Simpson,
1978). Building on the work of Bloom *et al.* (1956) and Williams and
Batten (1981), Roberts and Clifton advance a model to explain QSL in
the academic domain, especially classroom experience. Accordingly,
they distinguish between cognitive[13] and affective[14] dimensions, with
the former intended to reflect the level of intellectual challenge, the
latter the level of faculty support. Positive QSL would thus suggest an
optimum balance between the two. To date, their published efforts have
focused on the construction of a valid instrument, their results pro-
viding support for three cognitive[15] and four affective[16] dimensions. As
previous noted (6.1), only the affective domain proved generalizable
(cf. note 9, above).
   The strengths of this model are its specificity, testability, and particu-
larly its attempt to elaborate on what in other models is simply called
the "academic" domain. Nevertheless, it remains problematic in at least
four respects. First, there is some conceptual confusion between
"domains" and "dimensions". In most subjective well-being research,
cognitive and affective dimensions are distinguished within each of
several life domains. Consequently, one would normally regard "inter-
action with professors" as a domain whereas Roberts and Clifton treat
it as an affective dimension. Second, the authors concentrate on a
narrow range of "dimensions" further restricted to the campus setting.
The work of others (see above, 6.2) suggests that a broader array of
domains is probably relevant. Third, the authors disregard the self-
selected character of university populations. For example, in a study

of subjective well-being and marriage, White (1992) compared two hypotheses: that marriage "causes" people to be happy versus happy people "select" marriage. The results favored the latter view. Given what has been said above regarding university aspirations, selection and attainment, there is every reason to expect that self-selection will play an important role in QSL. Finally, in a similar vein, the authors ignore the university as complex organization. For example, in the process of registration, students are routinely forced to take courses in which they have no particular interest (Hendricks, 1975), a fact likely to dramatically change the meaning of their subsequent effort, including the definition of "challenge" and "support". In general, then, the model remains incomplete in light of the multiple contexts of student experience relevant to QSL.

QSL: inclusionary models. Two models of QSL are inclusionary in the above sense: Csikszentmihalyi's (1988a) flow theory, and Campbell *et al.'s* (1980) ecological theory of student satisfaction.

Csikszentmihalyi.. Within the context of SWB research, the leading activity-based theory is Csikszentmihalyi's flow model (Diener, 1984). As noted above, "flow" is used to describe the feelings (of happiness) and associated mental states (including ego loss, focused concentration, competence, and timelessness) experienced when engaging in activities as diverse as climbing a mountain, painting a picture, tilling a field, hanging out with "the guys", or working on a school project. Such happiness is intrinsically rewarding, with activities associated with flow likely to be repeated. Moreover, the key to the experience of flow is a clearly structured activity that is perceived as highly challenging and is matched by the respondent's equally high skill level, with both increasing if flow is to be maintained. In essence, what emerges is an ecological model of self, in which the latter is seen as the point of intersection and integration of multiple domains of experience, especially family, friends, work and school. Major results are reported above (6.3).

The strengths of this model are its ecological validity, conceptual clarity and its multileveled structure. That is, unlike other models, it clearly recognizes that individual behavior emerges from within a complex ecological context. This said, it too remains problematic in

several ways. First, while Csikszentmihalyi recognizes the influence of
genetic, cultural and, to a lesser extent, familial and peer group influ-
ences, the focus of the model is on the self as transcendent. This
person-centered perspective is curious, for while the author acknowl-
edges that most people's goal hierarchies and meaning systems are
socially derived, he chooses to highlight the exception, namely, con-
scious, individual choices which challenge the conventional, and in turn
de-emphasize the socially constructed character of reality. Second,
while the author's concern with behavior is a useful counterweight to
the overwhelming emphasis on cognitive processes in other models,
there is no necessary contradiction between the two approaches; flow
and discrepancy may coexist, even coincide. For example, Campbell *et
al.* (1976) and Andrews and Withey (1976) propose and Inglehart and
Rabier (1986) confirm that, through time, aspirations adapt to enduring
reality. Similarly, the author himself cites a study of two groups of
highly talented mathematics students, one of which found mathematics
exciting while the other found it boring. Csikszentmihalyi argues that
the answer lies in flow, but that supplies the what, not the why. Finally,
while the model is explicitly dynamic in a developmental sense —
unless both the level of challenge and skill increase through time, flow
gradually ceases — the model is otherwise static. Flow is a uniquely
individual experience, and only applies to specific activities, thus
leaving much about QSL unexamined. Put differently, this is to suggest
that the model is unevenly sensitive to the contexts within which
individuals are likely to make judgments regarding their QSL.

Campbell, Wilson and Hanson. For a study of mature entering students
at the University of Texas (Austin), Campbell *et al.* developed an
advanced model of QSL. This suggests that QSL is the interactive
consequence of student type, situational events (stress), stage of transi-
tion, and person-environment fit across six life domains concerning
experience both on- and off-campus. Moreover, the model is explicitly
ecological in accord with the thinking of Bronfenbrenner (1979) and
Lewin (1936). The results indicated that QSL was independent of
student background but was strongly related to academic performance
and situational stress. In turn, stress and fit were only moderately
related; while most respondents quickly resolved the stress associated

with university entry, some experienced no or little stress despite displaying manifestly poor fit. Thus, fit not only included academic and non-academic life domains, but was mediated by both situational factors and student type.

The models' complexity is both its major strength and its major weakness. On the one hand, the authors recognize the multidimensional character of QSL, especially the salience of context and time. They recognize too that different people can respond to roughly the same life circumstance in quite different ways, and that such responses need not be logical or indeed even rational. On the other hand, in light of the preceding discussion of definitional elements, the model is not complex enough to capture QSL. For example, QSL is conceived in terms of student satisfaction, and thus stands in contrast to notions of cognitive discrepancy or the contextual character of patterns of affective expression (Denzin, 1984; Lazarus, 1991). Similarly, the author's notion of student type is based on time use, a choice that while convenient and apparently valid, is theoretically uninformative as regards the bases upon which students interpret experience and thus feel high or low stress. Further, as a metaphor, the idea of "fit" is appealing. However, it lacks specificity (Nadler and Tushman [1980], for example, distinguish between six types of fit), is too simple (by failing to deal with "multiple fits" [Baird, 1988: 43]), and is passive (something people *experience*) rather than active (something people *do*) (Hobfoll, 1988: 130), the latter weakness captured by Hobfoll and Vaux's (1993: 697) observation that," . . . We can learn more from how a poor single mother lives reasonably than by how a rich man lives well." In contrast, Riegel's (1975) transactional notion of "synchrony" is probably more useful. Finally, the author's choice of life domains was based on a factor analysis of items listed in Andrews and Withey's (1976) study of adults. It thus appears less sensitive to student perceptions that the pilot study summarized above (6.2). More generally, then, while Campbell *et al.*'s is an excellent effort, it appears unevenly contextual.

An alternate model. Having found four of the leading models of QSL creative and useful but incomplete, an alternate model is advanced in their place. In the spirit of the "both/and" thinking characteristic of inclusive models, this will build on the strengths, of the models

reviewed above as well as the preceding discussion of definitional elements. The result is pictured below in Figures 3 and 4, the former providing a conceptual overview, the latter a more specific operational description.

This is an ecological model of QSL and as such is grounded in three assumptions. The first, in the words of Miller (1989: 428) is that, "The critical unit of analysis is the *transaction* between the organism and its context (social, historical, and physical)." (emphasis in original). This rejects the traditional either/or distinction between the individual and the environment, assuming instead, with Dewey and Bentley (1949), that "the actor and the situation are indivisible as a unit" (Forgas, 1982: 61). The second is that all actors see their own behavior as meaningful, and that meaning is always attached to some specific context. Consequently, to understand an actor's behavior will always involve some attention to the context(s) within which it occurred. Finally, for human actors reality is socially constructed, that is, behavior necessarily arises out of some meaning system which, in turn, is created, maintained and changed through on-going social interaction. This implies replacing the traditional view of the "self", as apart from the environment, with a social self, in which self and other are connected. In the words of Minuchin (1984: 2), "We are a culture that has enthroned the individual. We have an extraordinarily rich literature of individual psychology, but our insight has focused on the being inside the self. This is an extraordinary feat of the imagination because "disconnected" individuals do not exist. Life consists of growing, mixing, cooperating, sharing, and competing with others. Surely, most of us have had our most significant experiences within some form of the complex social unit we call a family."

In this context, the model depicted in Figure 3 proceeds from left to right. It begins with the family conceived here as a nested series of contexts: the family as an organized pattern of interaction, a particular meaning structure, a demographic structure and a particular place in the life cycle; the family as a member of a particular ethnic community as well as living in a particular geographic location; and, the family in society, having a particular social status and work history. In turn, this implies the importance of student finances and generational status. Similarly, "current living arrangement" and "other" describes the possi-
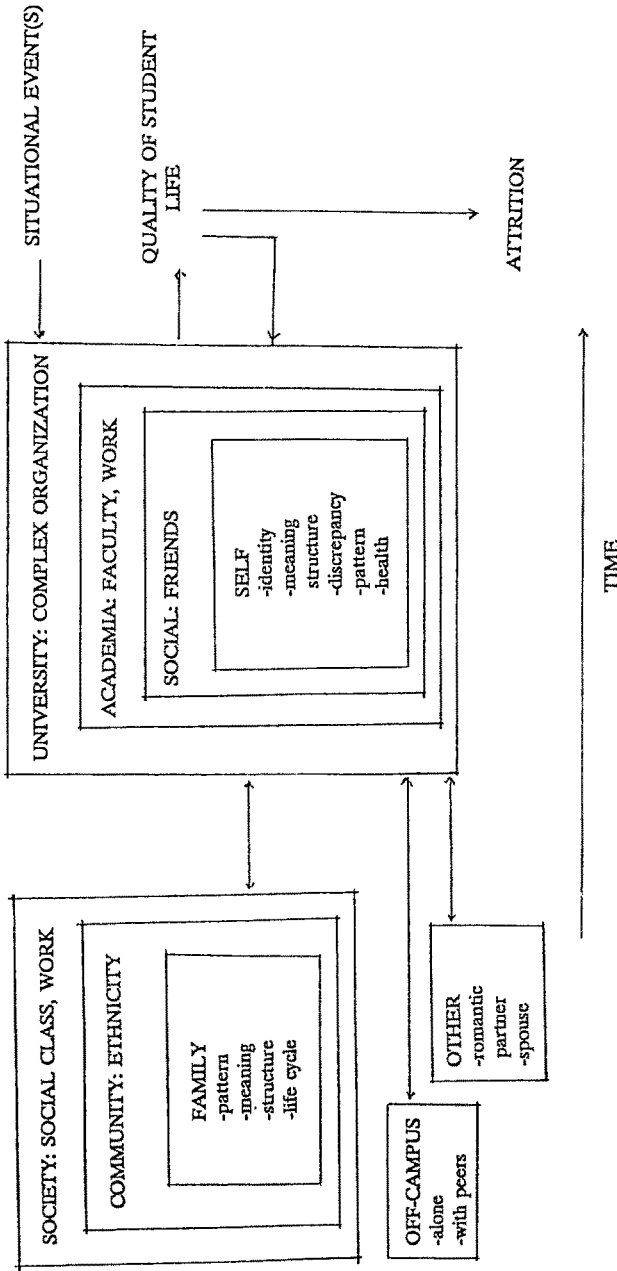
Fig. 3. Ecological model of QSL

bility of social influences other than familial, and implicitly calls attention to whether or not students live in residence or live off-campus and commute to university.

Next, the university is similarly described as a series of nested contexts: the individual or "self" in terms of identity (academic and social confidence, self-esteem, gender, and enduring affective state), meaning structure (expectations, goals, values), discrepancies (between aspirations and reality), patterns of thought and action (carried over from their family or changed in some way), and health (both physical and mental); the university as social context, including on-going relations with friends and, for those who live on campus, with roommates; the university as academia, including relations with faculty, choice of program, and experience of academic work (grades, number of courses, classroom sizes, and so on); and, university as complex organization, including structural (size, semester system, and so on [see Kuh, 1982]) and programmatic features (administrative complexity, course availability, extracurricular activities, student services, and so on). Further, all of the latter may be affected, either positively or negatively, by a range of possible situational events.

Together, the interaction of these various processes accounts for QSL, which in turn feeds back to affect both familial and university processes, that is, QSL is here conceived as *both* an independent and a dependent variable, depending on time and context. Thus, a positive QSL will increase the likelihood of academic and social success, whereas a negative QSL will decrease that likelihood, including the possibility of attrition.

Finally, QSL is seen as a time-dependent variable. In cross-sectional terms, this means that time at a given institution will either give different weight or meaning to the factors already listed and/or will suggest the operation of additional domains for different groups of students. For example, transition adjustment is relevant to the QSL of entering students, whereas employment opportunities affect the QSL of graduating students. In contrast, in longitudinal terms, this becomes a model of student development, in which QSL is seen as an important component in promoting or inhibiting cognitive and social transformation.

More generally, then, Figure 3 does three things: It specifies relevant

variables, indicates their locations (on or off campus), and, most importantly, underscores the extent to which student evaluations about their quality of life is necessarily and simultaneously embedded in a variety of contexts. This depiction, however, is limited, first, by the constraints of a two-dimensional model — it should really involve a three-dimensional animated sequence moving through time — and, second, by the deliberate omission of a detailed description of how specific variables interact.

For the latter, turn to Figure 4, below. This takes the form of a traditional path model, read for left to right. However, in the interests of simplicity, it has been altered in three ways: first, it has been simplified to omit the dense network of interactions implied by Figure 3, including the interactions among variable *within* variable-set boxes (in boldface), for example, between grades and instruction within the *academic* box; second, it has been modified to allow for the depiction of feedback processes in keeping with an ecological perspective but not permitted within path modelling conventions; and, to avoid "overdefining", several variable-set boxed (*family* is the sole exception), such as *living arrangements*, only appear once, although the arrows emerging from the box will indicate that it operates conceptually as both an independent and a mediating variable, based on variation in context and time.

The model begins by highlighting *four* sets of independent variables: (1) family (especially *family 2*), (2) social relations, (3) (stressful) life events, and (4) cognitive discrepancies. A commonplace observation is that relations with significant others — especially family members and poors, but also romantic partners, faculty members and others (for example, a favoured physician or a minister or rabbi) — are a primary source of conflict and distress but also of pleasure and support. Such relations are thus seen here as strongly associated with QSL. Next, life events, particularly negative events, are a primary sources of stress (see Miller, 1993). These may range from minor daily hassles to major life events. Irrespective of its source(s), a student's prevailing level of stress is likely to significantly colour their judgment of their QSL. Finally, emphasis by the university on academic achievement is such as to identify academic matters as another independent variable-set. Here, the notion of multiple discrepancies is especially apt, since student
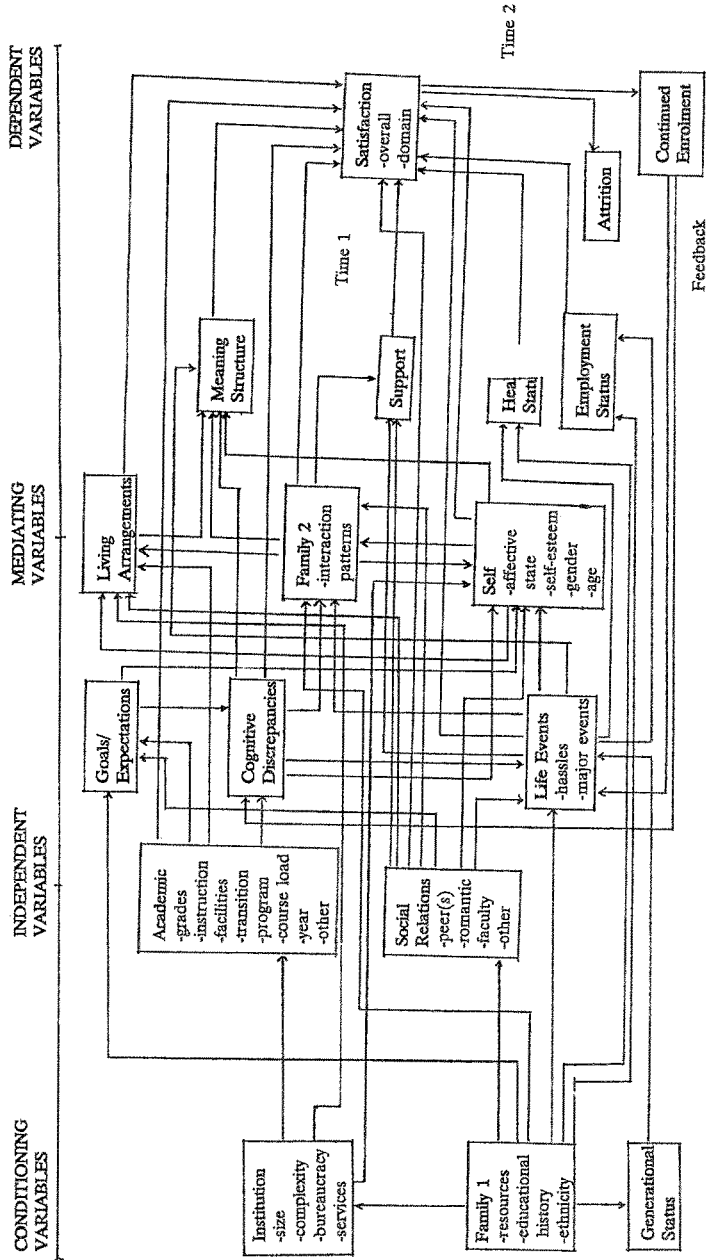
Fig. 4. Modified path model of QSL.

reports typically depict academic life as mixed, for example, good grades but poor facilities and a heavy course load (Benjamin, 1990). However, discrepancies imply comparisons, hence the importance of student goals and expectations. It is only in relation to such goals that academic experience may or may not give rise to discrepancies, with the latter directly impacting on QSL.

To this point, the model resembles conventional models of SWB, only modified to apply to university students. Where this model diverges, however, is in the view that these independent variable-sets are likely mediated by a range of additional variables. These are used to represent the various contexts in which students operate on a day-to-day basis. This model specifies *nine* mediating variables or variable-sets. However, towards greater conceptual clarity, two subsets of these variables are distinguished, based on their variability. Mediating variables are those that are themselves subject to considerable variation through time. In contrast, conditioning variables exhibit much slower rates of change, so that for all intents and purposes they may be regarded as invariant.

For that reason, the effects of the latter will typically be less potent and more indirect than their mediating counterparts. The conditioning effects of family 1 variables are readily apparent. For example, the likelihood of stressful life events appears related to family social class (based on family resources and parental educational history) and ethnicity, including such things as the death of a member, or of separation and divorce. Family social class also affects student status as regards employment, generation (that is, whether or not they are the first person in their family to have attended university), and health, each of which may, in turn, mitigate or exacerbate student stress. Further, the family is a major source of student goals and expectations. Thus, student expectations may well vary on the basis of family social class and this, in turn, suggests variation in the likelihood and magnitude of any discrepancies between, for example, expectations and year-end achievement. Similarly, social class and especially ethnicity suggests considerable variation in preferred patterns of intrafamilial relating, and, in turn, may impact on institution, with poor and/or visible minority students on affluent, all-white compus a prime example.

Finally, family social class also impacts on social expectations, and thus acts to condition student social relations.

As to institution, this includes a range of variables whose influence should not be underestimated. While student alienation, for example, can occur at any institution, it is more typically directly related to institutional size and complexity; as size and complexity rise, so too does the likelihood of student alienation. Thus, institution may affect a range of choices, both academic (such as program of study, quality of instruction, and so on) and non-academic (such as the range and availability of student services). Related effects may reflect the size and complexity of institutional bureaucracy, especially if this means that desired courses are unavailable. Finally, institutional alienation is also likely to impact on family interaction and student perceptions of self, with high alienation perhaps associated with decreased self-esteem and increased student demands for familial support (which may or may not be forthcoming [see below]).

Turning to the mediating variables, these include Family 2, self, living arrangements, meaning structure and support, with health and employment status having already been noted. Family 2 refers to those patterns of interaction which characterize the families of students. Available evidence (see Benjamin, 1988a) shows that such patterns vary widely, both in functionality and cordiality. Accordingly, inter-action between students and their families may play a major role in mitigating or exacerbating stress associated, for example, with conflict between peers or student reaction associated with one or more academ-ically-related cognitive discrepancies. In similar fashion, family-student interaction is likely associated with variation in level of social support together with student meaning structure and perceptions of self.

The variable-set self seeks to capture both dispositional and situa-tional processes. Age is an example of the latter: it typically reflects a student's level of educational and life experience, while denoting status (for example, as freshman or senior) in the university system. As such, it may mitigate the impact, for example, of negative relational events (such as the disruption of a romantic relationship); what may be experi-enced as devastating for a naive 18-year-old may be taken in stride by an experienced 24-year-old. Similarly, student goals and expectations, and their response to cognitive discrepancies will likely vary by age.

Esteem and gender are examples of the former. Self-confidence and a positive or coherent view of the world, for example, may significantly mitigate the effects of the stress associated with the transition from high school to university. Indeed, some students adjust to the transition in a matter of weeks, others require months to reach the same place (see Benjamin, 1990), while a small proportion never adjust, dropping-out after days, weeks, months or even years of university experience.

Living on or off campus is another important mediating context (Benjamin, 1988b). To start with, the self-selecting character of living arrangements must be emphasized. Thus, the decision whether to live in residence or off-campus may itself be multiply determined, including: institutional policy (universities may or may not require residence living among entering students) and resources (by definition, commuter colleges have no residential facilities); student preferences (in turn based, for example, on personality attributes, life experience and the identity of peers); and, family resources and interaction patterns. In addition, through time, living arrangements may or may not capture changing contexts. Some universities allow and some students prefer to remain in the same residence location throughout their university career. In other cases, residence living is used to buffer the transition from high school to university, with student moving off campus in subsequent years. In turn, living arrangements are known to shape student social relations in important ways. Compared to their counter-parts off campus, students who live on campus have access to a much wider range of others who, in turn, can be a critical source of support, both academic and personal. Such students also report much greater convenience in accessing campus resources and, as a function of their experience and program, interaction with faculty. In general, then, where students live represents a context which shapes much of their subsequent academic and social development, including evolution of their meaning structure. However, the likelihood that on campus living arrangements, for example, will mitigate negative academic experience is itself only probabilistic. Conflict between roommates, for example, can itself be a major source of stress and may, in certain cases, under-mine academic achievement.

Finally, student meaning structure is seen here to arise from multiple sources, including self, family, living arrangements, academic experience

and life events. Family processes help define for their members how the larger world is to be seen and interpreted, and who each member is, both to each other in the family per se, and in their relations with the outside world. Such definitions are enormously influential, but may or may not be consistent with how each member views themselves, both in the family and in the larger world beyond. Indeed, students may hold mutually contradictory views, seeing themselves as one sort of person in the family but quite another with their friends or their romantic partner (see Benjamin, 1990). Further, as noted above, the larger world of the university may, to a substantial degree, be subsumed by their living arrangements. The latter is especially true for students who live in residence where they typically spend most of their free time out of class. By contrast, this will be much less so for students who live at home or who make their own home with a partner, which those who live independently off campus (either alone or with peers) in some intermediate position. Whatever the source, this model suggests that meaning structure will significantly influence the interpretation of life events and cognitive discrepancies. That is, given similar objective circumstances, variation in meaning structures will correspond to significant differences in the perception of both stress and cognitive discrepancies.

Taken together, the mediating and conditioning variables listed here are likely to significantly affect student's interpretation of academic, familial, relational and life events.

In turn, the interaction of independent, conditioning and mediating variable sets will predict the status of student satisfaction, the key dependent variable-set. Overall student satisfaction is seen here as a single composite score, likely derived by combining domain satisfaction and happiness ratings. In contrast, domain satisfaction involves a series of satisfaction and happiness scores specific to the nine domains examined in Figure 2. More generally, this model argues that student satisfaction is multiply determined, with 11 predictor variables listed, that is, four independent variables (academic, cognitive discrepancy, social relations, life events) and seven mediating variables (meaning structure, support, employment status, health status, family, self and living arrangements).

However, the status of satisfaction is complicated by the additional

variable of time. Given the view that QSL be seen as a response to experience in the immediate or short-term past, its status at time 1 — for example, the end of semester 1 — is likely to affect the status of QSL at time 2, says, at year-end. Thus, QSL may be seen as effect in one context but cause in another (Veenhaven, 1984). That is, QSL, like family, is likely to shift status as a function of context, changing from dependent variable at time 1 to independent variable at time 2. For illustrative purposes only, the model indicates that QSL scores at time 2 influences cognitive discrepancies and life events. In fact, many more such loops might have been added, for example, regarding living arrangements, self, social relations, and so on. Moreover, this assumes continued enrolment, thus raising an alternative possibility, that poor QSL at time 1 may contribute to attrition. Indeed, in a sense, this model clarifies the extent to which there is likely to be predictable overlap between models of QSL and attrition.

Thus, more generally, the thrust of Figure 4 is to portray QSL as a dynamic multidimensional construct which operates as a barometer sensitive to the changing flux of student experience. Further, by specifying the status and interaction sequence among relevant variables, this Figure renders this model of QSL amenable to empirical test. Since this raises a host of methodological issues, it is to these that I turn in closing.

QSL: METHODOLOGICAL ISSUES

Finally, a coherent approach to QSL would be incomplete without some consideration of methodological issues. QSL research raises concerns about a range of such issues. Unfortunately, detailed exploration of all of them is beyond the purview of this paper. Instead, discussion will be limited to the three methodological issues regarded as most salient.

Perspective. The first issue is not so much methodological as it is philosophical. It concerns whose perspective should prevail in the selection of study methods: the researchers or the respondents. The former has been described as "adultocentric" (Benjamin, 1990) because it imposes adult assumptions and perspectives on student respondents

(Patton, 1991). For example, by coming to data collection with a fixed set of questions, researchers assume that they know what the right questions are, and thus have, by implication, omitted alternative questions they might have selected but did not. Similarly, by presenting respondents with a fixed set of alternatives for any given question — responses such as "other", "don't know" or "not sure" are typically omitted in subsequent analysis — researchers necessarily present respondents with a particular view of the issue in question, one with which they may or may not agree but can do nothing to change.

The alternative, a student-centered or qualitative perspective, is only now becoming more popular in higher education (Manning, 1992; Whitt, 1991), recognition that Kuh and Andreas (1991) regard as long overdue. This too builds on certain assumptions and perspectives. For example, it assumes that we, adult researchers, do *not* know, indeed *cannot* know, in advance what students think or feel; this can only be discovered by asking them. The same is true for response options applied to any given question. Once student subjective responses are known, then fixed question formats become both useful and ecologically valid, although even then some room for variation from the norm is called for. Moreover, the issue of perspective becomes more important with regards some issues than others. It is legitimate for researcher to pursue some aspect of students experience or behavior, though that may not parallel any similar student interest in the issue. Conversely, when researchers purport to represent student views, then the importance of student-centered data becomes more important.

QSL appears as just such a topic, such that any effort at instrument construction should begin with the unstructured subjective response of students. The pilot study, reported above (6.2), reflects this approach.

Time frame: present versus retrospective. Another issue concerns time frame, that is, whether students should be asked about their experience in the past or the present. Traditionally known as the problem of "retrospection", it has received considerable study in the methodological literature (see Creed, 1993; Rabkin, 1993). The thrust of this work is that retrospective accounts are subject to various forms of distortion. For example, in a study of entering students, Benjamin (1990) was able to compare retrospective accounts taken at the end of

the semester against diary accounts provided daily throughout the semester. The results showed considerable retrospective distortion based on student outcome: satisfied students remembered the semester as satisfying throughout, dissatisfied students the reverse, when in fact their daily diary reports indicated that both groups had experienced many ups and downs. Similarly, Csikszentmihalyi and Larson (1984) followed up a group of high school students two years after their initial involvement in a study of flow. This involved both interview and on-the-spot reports using experience sampling. In interview, students reported steady and consistent improvement across all life domains. On-the-spot data showed positive change in some domains but not others. The authors interpreted the difference as reflecting a change in the meanings these students attributed to their experience. In other words, different methods measured different things.

With regard to QSL, these data recommend measures which are as close to student's immediate experience as possible rather than relying, for example, on student's ability to summarize their experience over an entire semester. Moreover, where change in QSL is of concern, this reasoning would favor repeated measures, particularly given Larson and Csikszentmihalyi's (1983) view that, "One-time assessments appear to reflect response sets and cultural stereotypes as much as they do anything else." In addition, repeated measures would allow exploration of the possibility that past experiences (including QSL) have influenced the interpretation of current perceptions.

Data type: survey versus interview. The final issue concerns the type of data to be collected. Specifically, quantitative data using student surveys or qualitative data based on student interviews. At present, nearly all QSL studies rely on quantitative data in the form of standardized self-report surveys. Their advantages are numerous (Roberts and Clifton, 1991): They provide useful information at low cost, are more reliable (because more global) when compared to a single observer, include multiple student perspective (in large samples), and take account of data an observer might otherwise miss. Conversely, such methods are also problematic (Stage and Russell, 1992), for example, survey methods are vulnerable to social desirability response bias effects (Diener, 1984; Zautra and Goodhart, 1979), only apply at the indi-

vidual (as opposed to the community) level (Larson, 1978), and the views expressed do not necessarily (or even frequently) reflect how people actually behave (Deutscher, 1973), typically without recognizing any discrepancy between the two. Furthermore, such methods have typically been used to acquire *inter*individual or *intra*individual data, but not both. In Lazarus's (1991: 409) view, this is an error, since ". . . people who often feel bad often feel good, too (interindividual comparison), [while] at the moment they feel bad they are not also likely to feel good (intraindividual comparison . . .)" (parenthesis in original).

The alternative, student interviews, involve a mix of pros and cons (Manning, 1992; McCracken, 1988; Patton, 1990). Advantages include the following: they involve a creative collaboration between researchers and respondents, and so give the latter an opportunity to shape the research in a way not open to survey respondents; they provided richly detailed descriptive accounts which include nuances omitted using other methods; they provide the opportunity for unanticipated findings that are deliberately excluded using standardized measures; they are faithful to student's perspective, and more ecologically valid that other methods; and they contribute to the production of fundamental knowledge, and so may provide the basis for subsequent efforts at survey construction. Conversely, these advantages can only be gained at some risk, including problems associated with validity and trustworthiness, the fact that interviews are expensive in time and effort, that they are dependent on the interviewers' expertise and so may vary in quality, yield voluminous results that are difficult to disseminate in concise form, and, insofar as they are necessarily obtrusive, may unintentionally do psychological harm to respondents, especially if the topic of inquiry is emotionally charged for them (Webb *et al.*, 1981).

In the end, the choice of survey or interview cannot be resolved in any definitive way. Integral to both (indeed, all) methods are strengths and weaknesses. Consequently, the choice of method must ultimately turn on the objectives, concerns and circumstances of the study in question.

Integration: triangulation. Available QSL studies have, in light of an exclusive or "either/or" perspective on theory, responded by selecting one solution and rejecting all others. Thus, typical have been studies

that are "adultocentric" in design, relying on standardized self-report measures to collect retrospective data. The bias favored here, toward an inclusive or "both/and" approach to theory, suggests an alternative response involving "method triangulation" (Denzin, 1978; Webb *et at.*, 1981) that has only recently begun to gain some recognition in higher education (Stage and Russell, 1992). Given the strengths and weaknesses of all methods, triangulation involves the use of multiple methods in the study of a single phenomenon in the hope of maximizing study validity. Indeed, their combination builds on their combined strengths, for example, by constructing the questions and response categories in a widely disseminated survey instrument to reflect student interviews. Similarly, different methods might be used to reflect varying time intervals: observations and/or interviews to capture the immediate present, surveys to explore the near past, and registrarial and diary data to construct time series data. Finally, triangulation suggests the need for a complex sampling frame, especially as regards the need to capture the diversity of student types and circumstances. Thus, selection variables might include: academic year (1), gender (2), program (3), ethnicity (4). In turn, a sampling frame containing 96 cells would require a large sample of respondents, easily in excess of 2,000, and thus would be more appropriate for large as opposed to small institutions.

CONCLUSION

Undergraduate students lead complex lives. They struggle to meet the academic requirements of their program of study, while simultaneously coping with competing demands of parents, friends, romantic partners, employers and others. They may further confront acute and/or chronic problems with health and finances as well as unexpected life events. Moreover, their capacity to juggle those various concerns successfully, and the extent to which they view the stress this places on them as manageable, will vary. Separately, and in combination, these experiences contribute to QSL, which then feeds back, to mediate subsequent student coping efforts, including the decision to carry on to graduation or to cut short their education and seek an alternative life course.

This suggests that QSL is likely to play an salient role in the lives of undergraduate students, and thus should be included as an important

variable in efforts to understand student experiences and outcomes. At present, that is not the case in higher education, and deservedly so given the conceptual confusion which now characterized QSL. By suggesting several ways to bring coherence to this notion, this paper has sought to give QSL the prominence it deserves.

As noted in the introduction, such prominence should not be merely theoretical, but pragmatic as well. For university administrators and managers, a coherent use of QSL offers a strategic advantage in attracting and retaining students in light of data indicating "high" QSL. Similarly, data indicating a "low" QSL, either overall or more likely in specific domains and/or among specific students groups, provides the opportunity for targeted or focused programmatic efforts at change and improvement. This potentially represents an increase in efficiency compared to the generic interventions more typical of the field. Finally, QSL offers a complex but sophisticated and sensitive means of monitoring changing student sensibilities through time, both at the institutional level but more importantly among key student groups.

NOTES

[1] There is a similar diversity of interest in "quality" in literatures concerned with paid work (Lawler, 1977; Lawler *et al.*, 1980) and retail business (Lane, 1992).

[2] The Task Force on University Accountability (1993: Appendix G) lists 25 performance indicators.

[3] Some theorists would include a third dimension concerned with disposition or personality (Stull, 1987).

[4] For example: health, finances, family, job, friends, housing, partner, recreation, religion, self-esteem, transportation, and education (Michalos, 1993b).

[5] Indeed, the opposite is also implied, that is, current experience may retroactively alter the perception of past experiences. For example, on completion students may experience a given course negatively, saying that it was excessively difficult, unreasonably demanding or unconnected with their program of study. In light of subsequent experience, however, that evaluation may change, the students now saying that they learned much that they can only now make good use of.

[6] Recent evidence in a new field of study, psychoneuroimmunology (Ramey, 1989; Stein and Miller, 1993), comes to the same conclusion on the physiological level.

[7] Additional studies have examined the quality of experience — usually negative — of minority students enrolled in institutions in which most students are white (Allen, 1981, 1985, 1988; Burbach and Thompson, 1971; Madrazo-Peterson and Rodriguez, 1978; Nettles and Johnsons, 1987; Peterson *et al.*, 1978; Smith, 1980). They are excluded from consideration in this section because their concern with QSL is indirect rather than explicit.

[8] In more recent work, Roberts (personal communication, 1993) reports generalizable findings with regard to two cognitive dimensions.

[9] Faculty respondents were asked a similar question: "What sorts of things do you think affect the quality of life of students at the University of Guelph?"

[10] The 3M Teaching Award.

[11] This follows a related distinction between mechanistic and contextualist theoretical perspectives (Lazarus, 1991: 174— 176).

[12] The central place of discrepancy between aspirations and achievement is hardly unique to Michalos. It is also at the heart of exchange theory (see especially Sabatelli's [1984] model of marital relations) as well as models of person-environment congruence or fit (Baird, 1988; Holt, 1993), child development (Lerner, 1989) and occupational burnout (Pines, 1993).

[13] Specifically: knowledge, comprehension, application, analysis, synthesis, and evaluation.

[14] Specifically, positive affect, negative affect, status, identity, opportunity, and professors.

[15] Specifically, teaching method, pupil development, and subject expertise.

[16] Specifically, positive affect, negative affect, interaction with students, and interaction with professors.

REFERENCES

Abbey, A. and F. M. Andrews: 1986, 'Modeling the psychological determinants of life quality', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

Aleamoni, L. M. and L. Oboler, 1978, 'ACT verses SAT in predicting first semester GPA', Educational and Psychological Measurement 38, pp. 393—399.

Alexander, K. L.: 1982, 'Social background, academic resources, and college graduation: Recent evidence from the National Longitudinal Survey', American Journal of Education 90, pp. 315—333.

Allan, L. G., A. L. Darling, R. C. Hughes, and J. M. Rosenfeld: 1983, 'An examination of the performance of first year students at an Ontario university: An administrative perspective', Canadian Journal of Higher Education 13(3), pp. 37—54.

Allen, W. R.: 1981, 'Correlates of Black student adjustment, achievement, and aspiration at a predominantly White Southern university', in G. E. Thomas (ed.), Black Students in Higher Education: Conditions and Experiences in the 1970s (Greenwood Press, Westport, CT).

Allen, W. R.: 1985, 'Black student, White campus: Structural, interpersonal and psychological correlates of success', Journal of Negro Education 54, pp. 134—147.

Allen, W. R.: 1988, 'Improving Black student access and achievement in higher education', Review of Higher Education 11, pp. 403—416.

Ambert, A.-M.: 1990, 'Marital dissolution: Structural and ideological changes', in M. Baker (ed.), Families: Changing Trends in Canada. 2nd Ed. (McGraw-Hill Ryerson, Toronto).

Andrews, F. M. 1986, 'Editor's Introduction', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

Andrews, F. M. and J. P. Robinson: 1991, 'Measures of subjective well-being', in J. P. Robinson, P. R. Shaver, and L. S. Wrightman (eds.), Measures of Personality and Social Psychological Attitudes (Academic, NY).

Andrews, F. M. and S. B. Withey: 1976, Social Indicators of Well-Being: Americans' Perception of Life Quality (Plenum, NY).

Anisef, P., M.-A., Bertrand, U. Hortian, and C. E. James: 1986, Accessibility to Post-secondary Education in Canada: A Review of the Literature (Educational Branch, Department of the Secretary of State, Ottawa).

Anson, J.: 1988, 'Mortality and living conditions: Relative mortality levels and their relation to the physical quality of life in urban populations', Social Science and Medicine 27, pp. 901—910.

Antonovsky, A.: 1988, Unraveling the Mystery of Health: How People Manage Stress and Stay Well (Jossey-Bass, San Francisco).

Argyle, M.: 1987, The Psychology of Happiness (Methuen, London).

Argyle, M. and M. Henderson: 1985, The Anatomy of Relationships (Heinemann, London: Penguin, Harmondsworth).

Astin, A.: 1977, Four Critical Years: Effects of College on Beliefs, Attitudes, and Knowledge (Jossey-Bass, San Francisco).

Astin, A.: 1982, 'Why not try some new ways of measuring quality', Educational Record 63, pp. 10—15.

Astin, A.: 1984, 'Student involvement: A developmental theory for higher education', Journal of College Student Personnel 25, pp. 287—308.

Astin, A., W. Korm, and K. Green: 1987, 'Retaining and satisfying students', Educational Record 68(1), pp, 36—42.

Astin, A. W.: 1993, 'An empirical typology of college students', Journal of College Student Development 34, pp. 36—46.

Avaro, D. and L. Hanley: 1989, The Health of Canada's Children: A CICH Profile (Canadian Institute of Health, Ottawa).

Averill, J. R.: 1983, 'Studies on anger and aggression: Implications for theories of emotion', American Psychologist 38, pp. 1145—1160.

Babbitt, C. E. and H. J. Burbach: 1985, 'Women and the college environment: A study of organizational satisfaction, compliance and academic achievement', Sociological Focus 18, pp. 37—47.

Baird, L. L.: 1988, 'The college environment revisited: A review of research and theory', in J. C. Smart (ed.), Higher Education: Handbook of Theory and Research. Vol. 4 (Agathon, NY).

Baird, L. L.: 1984, 'Relations between ability, college attendance, and family income', Research in Higher Education 21, pp. 373—395.

Baker, H. S.: 1989, 'If Rocky goes to college: Dilemmas of working-class college students', Adolescent Psychiatry 16, pp. 70—91.

Banta T. W. and Associates (eds.): 1991, Assessing Quality in Higher Education. Proceedings of the Third International Conference (Bath College of Higher Education, Bath, UK).

Bateson, G. 1977, 'The thing of it is', in M. Katz, W. Marsh, and G. Thompson (eds.), Explorations of Planetary Culture at the Lindisfarne Conference: Earth's Answer (Harper & Row, NY).

Bateson, G.: 1979, Mind and Nature: A Necessary Unity (Dutton, NY).

Baxter Magolda, M. B.: 1992, Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development (Josey-Bass, San Francisco).

Bauer, J. W.: 1992, 'Self-reported gains in academic and social skills', Journal of College Student Development 33(6), pp. 492—498.

Bean, J. P. and R. K. Bradley: 1986, 'Untangling the satisfaction-performance relationship for college students', Journal of Higher Education 57, pp. 393—412.

Beatty-Guenter, P.: 1992, 'A typology of retention strategies at community colleges', Unpublished MS (School of Education, University of California).

Becker, H. S., B. Geer, and E. C. Hughes: 1968, Making the Grade: The Academic Side of College (Wiley, NY).

Bednarz, J.: 1984, 'Complexity and intersubjectivity: Towards the theory of Nikolas Luhmann', Human Studies 7, pp. 55—70.

Benjamin, M.: 1988a, Student Development and Family Systems: Critical Review and Implications for Theory and Practice. Student Development Monograph Series, Vol. 2 (Guelph, Ontario: University of Guelph, Student-Environment Study Group, ERIC ED346792).

Benjamin, M.: 1988b, Residence Life Systems and Student Development: A Critical Review and Reformulation. Student Development Monograph Series, Vol. 3 (Guelph, Ontario: University of Guelph, Student-Environment Study Group, ERIC ED346793).

Benjamin, M.: 1990, Freshman Daily Experience: Implications for Policy, Research and Theory. Student Development Monograph Series, Vol. 4 (Guelph, Ontario: University of Guelph, Student-Environment Study Group, ERIC ED346794).

Benjamin, G. A. H., A. Kaszniak, and S. B. Shanfield: 1986, 'The role of legal education in producing psychological distress among law students and lawyer', American Bar Association Research Journal, 2, pp. 225—262.

Berger, P. and H. Kellner: 1964, 'Marriage and the construction of reality: An exercise in the microsociology of Knowledge', Diogenes 46, pp. 1—25.

Berger, P. L. and T. Luckmann: 1966, The Social Construction of Reality (Doubleday, NY).

Billson, J. M. and T. Brooks: 1987, 'A student retention model for high education', College and University 62, pp. 290—305.

Billson, J. M. and M. B. Terry: 1982, 'In search of the silken purse: Factors in attrition among first-generation students', College and University 57, pp. 57—76.

Birnbaum, R.: 1988, How Colleges Work: The Cybernetics of Academic Organization and Leadership (Jossey-Bass, San Francisco).

Blimling, G. S.: 1989, 'A meta-analysis of the influence of college residence halls on academic performance', Journal of College Student Development 30, pp. 298—308.

Bloom, B. S., M. D. Engelhart, E. J. Furst, W. H. Hill, and D. R. Krathwohl: 1956, Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (Mackay, NY).

Blum, H. M., M. H. Boyle, and D. R. Offord: 1988, 'Single-parent families: Child psychiatric disorder and school performance', Journal of the American Academy of Child and Adolescent Psychiatry 27, pp. 214—219.

Bogue, E. G. and R. L. Saunders: 1992, The Evidence for Quality: Strengthening the Tests of Academic and Administrative Effectiveness (Josey-Bass, San Francisco).

Booth, R., D. Bartlett, and J. Bohnsack: 1992, J. 'An examination of the relationship between happiness, loneliness, and shyness in college students', Journal of College Student Development 33, pp. 157—162.

Bourdieu, P.: 1977, Outline of a Theory of Practice (Trans. R. Nice) (Cambridge University Press, Cambridge).

Bowles, S.: 1977, 'Unequal education and the reproduction of the social division of labor', in J. Karabel and A. H. Halsey (eds.), Power and Ideology in Education (Oxford University Press, NY).

Boyer, E. L.: 1987, College: The Undergraduate Experience in American (Harper and Row, NY).

Braxton, J. M., 1991, 'The influence of graduate department quality on the sanctioning of scientific misconduct', Journal of Higher Education 62(1), pp. 87—108.

Breunlin, D. C.: 1989, 'Clinical implications of oscillation theory: Family development and the process of change', in C. N. Ramsey Jr. (ed.), Family Systems in Medicine (Guilford, NY).

Brody, J. G. and G. R. Hanson: 1979, Assessing students' perceptions of quality of educational life (Paper presented at the APA Division 17 Symposium, New York, NY).

Bronfenbrenner, U.: 1979, The Ecology of Human Development (Harvard University Press, Cambridge, MA).

Bronfenbrenner, U., P. Moen, and J. Garbarino: 1984, 'Child, family, and community', in R. D. Parke (ed.), Review of Child Development Research, Vol. 7: The Family (University of Chicago Press, Chicago).

Brooks Terry, M.: 1988: 'Tracing the disadvantages of first-generation college students: An application of Sussman's option sequence model', in S. K. Steinmetz (ed.), Family and Support Systems Across the Life Span (Plenum, NY).

Brown, R. D.: 1982, 'Quality of student values: An agenda for the profession'.

Brown, G. W. and T. Harris: 1978, Social Origins of Depression: A Study of Psychiatric Disorder in Women (Tavistock, London).

Burbach, H. J. and M. A. Thompson: 1971, 'Alienation among college freshmen: A comparison of Puerto Rican, Black and White students', Journal of College Student Personnel 12, pp. 248—252.

Butters, J. M., J. N. Williams, and L. J. Abbott: 1991, 'Quality assessment/assurance activities in U.S. dental schools', Journal of Dental Education 55, pp. 565—569.

Campbell, A., P. E. Converse, and W. L. Rogers: 1976, 'The Quality of American Life (Russel Sage, NY).

Campbell, M. D., L. G. Wilson, and G. R. Hanson: 1980, The Invisible Minority: A Study of Adult University Students (Final Report to the Hogg Foundation for Mental Health, Austin, TX).

Capella, B. J., M. Wagner, and J. A. Kusmierz: 1982, 'Relationship of study habits and attitudes to academic performance', Psychological Reports 50, pp. 593—594.

Carnoy, M.: 1974, Education as Cultural Imperialism (Longman, London).

Cater, R. T. and E. E. Parks: 1992, 'White ethnic group membership and cultural value preferences', Journal of College Student Development 33(6), pp. 499—506.

Center for Instructional Development: 1992, Student Perceptions of Student Life (Syracuse University, Syracuse, NY).

Centre for Higher Education Studies: 1992, 'Identifying and developing a quality ethos for teaching in higher education' (Institute of Education, Newsletter 2, London, UK).

Chalfant, H. P.: 1985, Sociology of Poverty in the United States: An Annotated Bibliography (Greenwood, Westport, CN).

Chamberlain, K. and S. Zika: 1992, Stability and change in subjective well-being over short time periods', Social Indicators Research 26, pp. 101—117.

Clark, B. R.: 1960, 'The cooling-out function in higher education', American Journal of Sociology 65, pp. 569—576.

Clark, B. R.: 1980, 'Cooling out function revisited', New Directions for Community Colleges 32, pp. 15—31.

Clark, S. M. and D. R. Lewis: 1988, 'Faculty vitality: Context, concerns, and prospects', in J. C. Smart (ed.), Higher Education: Handbook of Theory and Research, Vol. 4 (Agathon, NY).

Clifton, R. A., D. Mandzuk, and L. W. Roberts: in press, 'The alienation of under-graduate education students: A case study of a Canadian university', Journal of Education for Teaching.

Clotfelter, C. R., M. G. Ehrenberg, and J. Siegreid: 1991, Economic Challenges in Higher Education (University of Chicago Press, Chicago).

Cohen, J.: 1987, 'Parents as educational models and definers', Journal of Marriage and the Family 49, pp. 339—351.

Cohen, S., G. Evans, D. Stokols, and D. Krantz: 1986, Behavior, Health, and Environ-
mental Stress (Plenum, NY).
Colclough, G. and E. M. Beck: 1986, 'The American educational structure and the
reproduction of social class', Sociological Inquiry 56, pp. 456—473.
Colman, C.: 1986, 'International family therapy: A view from Kyoto, Japan', Family
Process 25, pp. 651—664.
Colon, F.: 1980, 'The family life cycle of the multiproblem poor family', in E. A. Carter
and M. McGoldrick (eds.), The Family Life Cycle: A Framework for Family
Therapy (Gardner, NY).
Connelly, C. D. and M. A. Straus: 1992, 'Mother's age and risk for physical abuse',
Child Abuse & Neglect 16, pp. 709—718.
Cookson P. W. Jr and C. H. Persell, 1985, Preparing for Power: America's Elite
Boarding Schools (Basic, NY).
Craft, A. (ed.): 1992, Quality Assurance in Higher Education: Proceedings of an
International Conference (Falmer, London).
Creed, F.: 1993, 'Stress and Psychosomatic disorders', in L. Goldberger and S. Breznitz
(eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press,
NY).
Csikszentmihalyi, M.: 1988a, 'The flow experience and its significance for human
psychology', in M. Csikszentmihalyi, M. and I.S. Csikszentmihalyi (eds.), Optimal
Experience: Psychological Studies of Flow in Consciousness (Cambridge University
Press, Cambridge, MA).
Csikszentmihalyi, M.: 1988b, 'The future of flow', in M. Csikszentmihalyi and I. S.
Csikszentmihalyi (eds.), Optimal Experience: Psychological Studies of Flow in
Consciousness (Cambridge University Press, Cambridge, MA).
Csikszentmihalyi, M. and Csikszentmihalyi, I. S. (eds.): 1988, Optimal Experience:
Psychological Studies of Flow in Consciousness (Cambridge University Press,
Cambridge, MA).
Csikszentmihalyi, M. and R. Larson: 1984, Being Adolescent: Conflict and Growth in
the Teenage Years (Basic, NY).
Csikszentmihalyi, M. and E. Rochberg-Halton: 1981, The Meaning of Things: Domestic
Symbols and the Self (Cambridge University Press, Cambridge, MA).
CVCP Academic Audit Unit: Notes for the Guidance of Auditors (Scotland), 1991.
D'Andrade, R. G.: 1984, 'Cultural meaning system', in R. A. Shweder and R. A. LeVine
(eds.), Culture Theory: Essays on Mind, Self, and Emotion (Cambridge University
Press, Cambridge, UK).
Davis, E. E. and M. Fine-Davis: 1991, 'Social indicators of living conditions in Ireland
with European comparisons', Social Indicators Research 25, pp. 103—365.
DeLongis, A., J. Coyne, G. Dakof, S. Folkman, and R. Lazarus: 1982, 'Relationship of
daily hassles, uplifts, and major life events to health status', Health Psychology 1, pp.
119—136.
Denzin, N. K.: 1978, The research Act: A Theoretical Introduction to Sociological
Research (McGraw Hill, NY).
Denzin, N. K.: 1984, On Understanding Emotion (Jossey-Bass, San Francisco).
DeVore, J. R.: 1983, The Ecology of Student Satisfaction: An Empirical Study
(Unpublished doctoral dissertation, St. Louis University).
Devore, W. and E. G. Schlesinger: 1987, Ethnic-Sensitive Social Work Practice. 2nd
Ed. (Macmillan, NY).
Deutscher, I.: 1973, What We Say/What We Do: Sentiments and Acts (Scott,
Foresman, Glenview, IL).
Dewey, J. and A. F. Bentley: 1949/1975, Knowing and the Known (Greenwood Press,
Westport, CN).
Diener, E.: 1984, 'Subjective well-being', Psychological Bulletin 95, pp. 542—575.

Dohrenwend, B. P., K. G. Raphael, S. Schwartz, A. Stueve, and A. Skokol: 1993, 'The Structured event probe and narrative rating method for measuring stressful life events', in L. Goldberger and S Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

Douthitt, R. A., M. Macdonald, and R. Mulli: 1992, 'The relationship between measures of subjective and economic well-being: A new look', Social Indicators Research 26, pp. 407—422.

Economic Council of Canada: 1992, A Lot to Learn: Education and Training in Canada (Minister of Suppy and Services Canada, Ottawa).

Endo, J. J.: 1990, 'Assessing the educational performance of minority students: The case of Asian and Pacific Americans', New Directions for Institutional Research 65, pp. 37—52.

Engel, G. L.: 1977, 'The need for a new medical model: Challenge for biomedicine', Science 196, pp. 129—136.

Erwin, T. D.: 1991, Assessing: Student Learning and Development (Jossey-Bass, San Francisco).

Ewell, P. T.: 1991, 'Assessment and public accountability: Back to the future', Change Nov/Dec.

Ewell, P. T.: 1988, 'Outcomes, assessment, and academic improvement: In search of usable knowledge', in J. C. Smart (ed.), Higher Education: Handbook of Theory and Research, Vol. 4 (Agathon, NY).

Ewell, P. T. and D. P. Jones: 1991, 'Assessing and reporting student progress: A response to the "new accountability" ', State Higher Education Executive Officers.

Faris, R. E. L. and H. Dunham: 1939, Mental Disorders in Urban Areas (University of Chicago Press, Chicago).

Finifter, D. H., R. G. Baldwin, and J. R. Thelin: 1991, 'The Uneasy Public Policy Triangle in Higher Education: Quality, Diversity, and Budgetary Efficiency (Macmillan, NY).

Forgas, J. P.: 1982, 'Episode cognition: Internal representations of interaction routines', in L. Berkowitz (ed.), Advances in Experimental Social Psychology (Adademic, NY).

Franenhaeuser, M.: 1975a, 'Experimental approaches to the study of catecholamines and emotion', in L. Levi (ed.), Emotions: Their Parameters and Measurement (Raven, NY).

Franenhaeuser. M.: 1975b, 'Sympathetic-adrenomedullary activity, behavior, and the psychosocial environment', in P. H. Venables and M. J. Christie (eds.), Research in Psychophysiology (Wiley, NY).

Frankenhaeuser, M.: 1979, 'Psychoneuroendocrine approaches to the study of stressful person-environment interactions', in H. Selye (ed.), Selye's Guide to Stress Research (Van Nostrand Reinhold, NY).

Fulmer, R. H.: 1988, 'Lower-income and professional families: A comparison of structure and life cycle processes', in B. Carter and M. McGoldrick (eds.), The Changing Family Life Cycle: A Framework for Family Therapy, 2nd Ed. (Gardner, NY).

Gecas, V.: 1979, 'The influence of social class on socialization', in W. R. Burr, R. Hill, F. I. Nye, and I. L. Reiss (eds.), Contemporary Theories of the Family, Vol. 1 (Free Press, NY).

Gergen, K. J.: 1985, 'The social constructionist movement in modern psychology', American Psychologist 40, pp. 266—275.

Geulen, D.: 1986, 'The conditions of human development: Implications of socialization research for development theory', in P. L. C. van Geert (ed.), Theory Building in Developmental Psychology. Advances in Psychology 36 (North-Holland, Amsterdam).

Gillon, R.: 1986, 'Suicide and voluntary euthenasia: Historical perspective', in A. B.

Downing, and B. Smoker (eds.), Voluntary Euthanasia: Experts Debate the Right to Die (Peter Owen, London).

Goldberger, L. and S. Breznitz (eds.): 1993, Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

Goodwin, L. D. and E. A. Stevens: 1993, 'The influence of gender on university faculty members' perceptions of "good" teaching', Journal of Higher Education 64, pp. 166—185.

Gottlieb, B. H.: 1987, 'Using social support to protect and promote health', Journal of Primary Prevention 8, pp. 49—70.

Graig, E.: 1993, 'Stress as a consequence of the urban physical environment', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

Green, B. L.: 1982, 'Assessing levels of psychological impairment following disaster', Journal of Nervous and Mental Disease 17, pp. 544—552.

Guppy, N. and V. Bednarski: 1992, Enhancing Student Retention in Hight Education: A Literature Review (B.C. Council on Admission and Transfers, Vancouver).

Handal, P. J. and C. Moore: 1987, 'The influence of physical, psychosocial, and sociocultural supplies on mental health and life satisfaction: A test of Caplan's supply model', Journal of Primary Prevention 7, pp. 132—142.

Hanson, G. R. and B. R Price: 1992, 'Academic program review', in M. A. Whitely, J. D. Porter and R. H. Fenske (eds.), The Primer for Institutional Research. Resources for Institutional Research; #7 (Association for Institutional Research, Tallahassee, Florida).

Headley, B., R. Veenhoven, and H. Wearing: 1991, 'Top-down versus bottom up theories of subjective well-being', Social Indicators Research 24, pp. 71—100.

Heichberger, R. L.: 1991, 'Quality in college teaching: Effective elements', College Student Journal 25, pp. 207—210.

Held, B. S. and D. C. Bellows,: 1983, 'A family systems approach to crisis reactions in college students', Journal of Marriage and Family Therapy 9, pp. 365—373.

Hendel, D. D.: 1985, 'Effects of individualized and structured college curricula on students' performance and satisfaction', American Educational Research Journal 22, pp. 117—122.

Hendershott, A. B., S. P. Wright, and D. Henderson: 1992, 'Quality of life correlates for university students', NASPA Journal 30(1), pp. 11—19.

Hendricks, G.: 1975, 'University registration systems: A study of social process', Human Organization 34, pp. 173—181.

Heverly, M. A.: 1992, 'Total quality management', in M. A. Whitely, J. D. Porter, and R. H. Fenske (eds.), The Primer for Institutional Research. Resources for Institutional Research, #7 (Association for Institutional Research, Tallahassee, Florida).

Hines, P. M.: 1988, 'The family life cycle of poor black families', in B. Carter and M. McGoldrick (eds.), The Changing Family Life Cycle: A Framework for Family Therapy. 2nd Ed. (Gardner, NY).

Hobfoll, S. E.: 1988, The Ecology of Stress (Hemisphere, NY).

Hobfoll, S. E. and A. Vaux: 1993, 'Social support: Social resources and social context', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects. 2nd Ed. (Free Press, NY).

Hobfoll S. E. and S. Walfisch: 1986, 'Stressful events, mastery and depression: An evaluation of crisis theory', Journal of Community Psychology 14, pp. 183—195.

Hochschild, A. R.: 1979, 'Emotion work, feeling rules, and social structure', American Journal of Sociology 85, pp. 551—575.

Holland, D. C. and M. A. Eisenhart: 1990, Educated in Romance; Women Achievement, and College Culture (University of Chicago Press, Chicago).

Hollinghead, A. A. and F. C. Redlich: 1958, Social Class and Mental Illness (Harper, NY).

Holt, R. R.: 1993, 'Occupational stress', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

House, J. S.: 1986, 'Social support and the quality and quantity of life', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

House, J. S., D. Umberson, and K. R. Landis: 1988, 'Structure and process of social support', Annual Review of Sociology 14, pp. 293—318.

Inglehart, R. and J.-R. Rabier: 1986, 'Aspirations adapt to situations — but why are the Belgians so much happier than the French? A cross-cultural analysis of the subjective quality of life', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

Kanner, A. D., J. C. Coyne, C. Schaefer, and R. S. Lazarus: 1981, 'Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events', Journal of Behavioral Medicine 4, pp. 1—39.

Katz, R. N. and R. P. West: 1992, 'Sustaining excellence in the 21st century: A vision and strategy for college and university administrators', Professional Paper Series No. 8, CAUSE.

Kaufman, M. A. and D. G. Creamer: 1991, 'Influence of student goals for college on freshman-year quality of effort and growth', Journal of College Student Development 32, pp. 197—206.

Keller, G.: 1992, 'Increasing quality on campus: What should colleges do about TQM mania?', Change May/June, pp. 48—51.

Kells, H.: 1991, 'Incentives and planned change: The use of incentives in university evaluation processes', Higher Education Management 3(2), pp. 159—165.

Kinney, P. and M. J. Miller: 1988, 'The relationship between self-esteem and academic achievement', College Student Journal 22, pp. 358—362.

Kleinman, A.: 1983, 'The cultural meanings and social use of illness', Journal of Family Practice 16, pp. 539—545.

Kobasa, S. C.: 1979, 'Stressful life events, personality, and health: An inquity into hardiness', Journal of Personality & Social Psychology 37, pp. 1—11.

Knox, W. E., P. Lindsay, and M. N. Kolb: 1992, 'Higher education, college characteristics, and student experiences', Journal of Higher Education 63(3), pp. 303—328.

Kohn, M. L.: 1973, 'Social class and schizophrenia: A clinical review and a reformulation', Schizophrenia Bulletin 7, pp. 60—79.

Kohn, M. L.: 1983, 'On the transmission of values in the family: A preliminary formulation', Research in the Sociology of Education and Socialization 4.

Komarovsky, M.: 1985, Women in College: Shaping New Feminine Identities (Basic, NY).

Kuh, G. D.: 1982, Towards enhancing the quality of student life (Paper presented at the meeting of the ACPA Executive Council, Detroit).

Kuh, G. D.: 1989, 'Organizational concepts and influences', in U. Delworth, G. R. Hanson and Associates (eds.), Student Services: A Handbook for the Profession (Jossey-Bass, San Francisco).

Kuh, G. D. and R. E. Andreas: 1991, 'It's about time: Using qualitative methods in student life studies', Journal of College Student Development 32, pp. 397—405.

Kuh, G. D., J. H. Schuh, E. J. Whitt, and Associates: 1991, Involving Colleges: Successful Approaches to Fostering Student Learning and Development Outside the Classroom (Jossey-Bass, San Francisco).

Landua, D.: 1992, 'An attempt to clarify satisfaction changes: Methodological and

content aspects of a longitudinal problem', Social Indicators Research 26, pp. 221–241.

Lane, H.: 1992, Service Quality in Student Housing. Unpublished MS, University of Guelph (Canada).

Larson, R.: 1978, 'Thirty years of research on the subjective well-being of older Americans', Journal of Gerontology 33, pp. 109–125.

Larson, R. and M. Csikszentmihalyi: 1983, 'The experience sampling method', in H. T. Reis (ed.), Naturalistic Approaches to Studying Interaction. NRE Directions for Methodology of Social and Behavioral Science, #15 (Jossey-Bass, San Francisco).

Lawler, E. III: 1977, 'Improving the quality of work life: Reward systems', in J. Hackman and J. Suttle (eds.), Improving Life at Work: Behavioral Science Approaches to Organizational Change, Goodyear, Santa Monica, CA.

Lawler, E. E., D. A. Nadler, and C. Cammann (eds.): 1980, Organizational Assessment (Wiley, NY).

Lazarus, R. S.: 1991, Emotion and Adaptation (Oxford University Press, NY).

Lazarus, R. S. and S. Folkman: 1987, 'Transactional theory and research on emotions and coping', European Journal of Personality 1, pp. 141–169.

Lerner, R. M.: 1989, 'Individual development and the family system: A life-span perspective', in K. Kreppner and R. M. Lerner (eds.), Family Systems and Life-Span Development (Erlbaum, Hillsdale, NY).

Levine, A and Associates: 1989, Shaping Higher Education's Future: Demographic Realities and Opportunities, 1990–2000 (Jossey-Bass, San Francisco).

Levine, D. U. and R. J. Havighurst: 1984, 'Society and Education, 6th ed. (Allyn and Bacon, Boston).

Levitz, R.: 1992a, 'Minority student retention', Recruitment and Retention, April, 4–5.

Levitz, R.: 1992b, 'Measuring institutional effectiveness', Recruitment and Retention, June, 5–6.

Lewin, K.: 1936, Principles of Topological Psychology (McGraw-Hill, NY).

Lewis, I.: 1984, The Student Experience in Higher Education (Croom Helm, London).

Light, R. J.: 1990, The Harvard Assessment Seminars, First Report (Harvard University Press, Cambridge, MA).

Light, R. J.: 1992, The Harvard Assessment Seminars, Second Report (Harvard University Press, Cambridge, MA).

Lowe, G. D. and D. D. Witt: 1986, 'Early marriage as a career contingency: The prediction of educational attainment', Journal of Marriage and the Family 48, pp. 783–794.

Luhmann, N.: 1982, The Differentiation of Society (Columbia University Press, NY).

Madrazo-Peterson, R. and M. Rodriguez: 1978, 'Minority students' perception of a university environment', Journal of College Student Personnel 19, pp. 259–263.

Managan, K.: 1992, 'Despite enrolment gains, hispanics' college-going rate changes little in decade', Chronicle of Higher Education, Feb. 26, pp. A36–7.

Manning, K.: 1992, 'A rationale for using qualitative research in student affairs', Journal of College Student Development 33, pp. 132–136.

Marshall, C., Y. S. Lincoln, and A. E. Austin: 1991, 'Integrating a qualitative and quantitative assessment of the quality of academic life', in D. M. Fetterman (ed.), Using Qualitative Methods in Institutional Research. New Directions for Institutional Research (#72) 18(4), pp. 65–80.

Mason, J.: 1971, 'A re-evaluation of the concept of "non-specificity" in stress research', Journal of Psychiatric Research 8, pp. 323–333.

Mathiasen, R. E.: 1984, 'Predicting college academic achievement: A research review', College Student Journal 18, pp. 380–387.

Mayhew L. B., P. J. Ford, and D. L. Hubbard: 1990, The Quest for Quality: The Challenge for Undergraduate Education (Jossey-Bass, San Francisco).

Maclean's Magazine: 1991, 'A Measure of Excellence: Ranking the Universities', October 21, pp. 12—68.

McCracken, G.: 1988, The Long Interview. Qualitative Research Method Series, Vol. 13 (Sage, Newbury Park, CA).

McGoldrick, M.: 1982, 'Ethnicity and family therapy: An overview', in M. McGoldrick, J. K. Pearce, and J. Giordano (eds.), Ethnicity and Family Therapy (Guildford, NY).

McGoldrick, M.: 1988: 'Ethnicity and the family life cycle', in B. Carter and M. McGoldrick (eds.), The Changing Family Life Cycle: A Framework for Family Therapy. 2nd Ed. (Gardner, NY).

McLanahan, S.: 1992, 'Intergenerational consequences of divorce: The United States perspective', in L. Weitzman and M. Maclean (eds.), Economic Consequences of Divorce: The International Perspective (Clarendon Press, Oxford).

Meyers, G. P.: 1979, Student Stereotypes for Adaptation in the Academic Arena: A Description of Collective Behaviour at One University, Unpublished doctoral dissertation, Department of Sociology, University of Toronto.

Michalos, A. C.: 1985, 'Multiple Discrepancies theory (MDT)', Social Indicators Research 16(4), pp. 347—414.

Michalos, A. C.: 1986, 'Job satisfaction, marital satisfaction, and quality of life: A review and a preview', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, Ann Arbor, MI, University of Michigan).

Michalos, A. C.: 1991a, Global Report on Student Well-Being. Volume I: Life Satisfaction and Happiness (Springer-Verlag, NY).

Michalos, A. C.: 1991b, Global Report on Student Well-Being. Volume II: Family, Friends, Living Partner, and Self-Esteem (Springer-Verlag, NY).

Michalos, A. C.: 1993a, Global Report on Student Well-Being. Volume III: Employment, Finances, Housing, and Transportation (Springer-Verlag, NY).

Michalos, A. C.: 1993b, Global Report on Student Well-Being. Volume IV: Religion, Education, Recreation, and Health (Springer-Verlag, NY).

Miller, P. H.: 1989, Theories of Developmental Psychology. 2nd Ed. (Freeman, NY).

Miller, T. W.: 1993, 'The assessment of stressful life events', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects. 2nd Ed. (Free Press, NY).

Miller, C. M. L. and M. Parlett: 1976, 'Cue-consciousness', in M. Hammersley and P. Woods (eds.), The Process of Schooling: A Sociological Reader (Open University Press and Routledge and Kegan Paul, London).

Minuchin, S.: 1984, Family Kaleidoscope: Images of Violence and Healing (Harvard University Press, Cambridge, MA).

Mitchell R. G. Jr.: 1988, 'Sociological implications of the flow experience', in M. Csikszentmihalyi and I. S. Csikszentmihalyi (eds.), Optimal Experience: Psychological Studies of Flow in Consciousness (Cambridge University Press, Cambridge, MA).

Miyake, K., J. J. Campos, J. Kegan, and D. L. Bradshaw: 1986, 'Issues in socio-emotional development', in H. Stevenson, H. Azuma, and K. Hakuta (eds.), Child Development and Education in Japan (Freeman, NY).

Moffat, M.: 1991, 'Undergraduate culture and higher education', Journal of Higher Education 62(1), pp. 44—61.

Mow, S. L and M. T. Nettles: 1990, 'Minority student access to, and persistence and performance in, college: A review of trends and research literature', in J. C. Smart (ed.), Higher Education: Handbook of Theory and Research, Vol. 6 (Agathon, NY).

Mullis, R. J.: 1992, 'Measures of economic well-being as predictors of psychological well-being', Social Indicators Research 26, pp. 119—135.

Musschenga, A. W.: 1990, 'Moral justification of the killing of incompetent patients', in A. O. A. Smook and B. Vos-Schippers (eds.), Right to Self-Determination (VU University Press, Amsterdam)

Nadler, D. A. and M. L. Tushman: 1980, 'A congruence model for organizational assessment', in E. E. Lawler, D. A. Nadler, and C. Cammann (eds.), Organizational Assessment (Wiley, NY).

Nagasawa, R. and D. J. Espinoza: 1992, 'Educational Achievement and the adaptive strategy of Asian American college students: Facts, theory, and hypothesis', Journal of College Student Development 33, pp. 137—142.

Nettles, M. T.: 1990, Editor's Notes, New Directions for Institutional Research 65, i.

Nettles, M. T. and J. R. Johnson: 1987, 'Race, sex, and other factors as determinants of college students' socialization', Journal of College Student Personnel 28, pp. 512—524.

Nettles, M. T., A. R. Theony, and E. J. Grosman: 1986, 'Comparative and predictive analyses of Black and White students' college achievement and experiences', Journal of Higher Education 57, pp. 289—318.

Newson, J. and E. Newson: 1976, Seven Years Old in the Home Environment (Pelican, London).

Nieves, W. and M. Valle: 1982, 'The Puerto Rican family: Conflicting roles for the Puerto Rican college student', Journal of Non-White Concerns in Personnel and Guidance 10, pp. 154—160.

Noble, J. P. and R. L. Sawyer: 1989, 'Predicting grades in college freshman English and Mathematics courses', Journal of College Student Development 30, pp. 345—353.

Noel, L., R. Levitz, D. Saluri and Associates (eds.): 1985, Increasing Student Retention: Effective Programs and Practices for Reducing the Dropout Rate (Jossey-Bass, San Francisco).

Offord, D. R. and M. H. Boyle: 1987, 'Morbidity among welfare children in Ontario', Canadian Journal of Psychiatry 32, pp. 518—525.

Ong, J.: 1989, A Study of Higher Education Achievements of Asian Americans in the Sciences (Unpublished doctoral dissertation, Arizona State University, Tempe, AZ).

Ontario Council on University Affairs: 1991, Academic Program Quality Reviews (Ontario Council on University Affairs, Working Paper, Ottawa).

Ortiz, V. and C. H. Arce: 1986, 'Quality of life among persons of Mexican descent', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

Ouellette, S. C.: 1993, 'Inquiries into hardiness', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd ed (Free Press, NY).

Pace, C. R.: 1984, 'Measuring the Quality of College Student Experiences: An Account of the Development and Use of the College Student Experiences Questionnaire' (Higher Education Research Institute, University of California, ERIC ED255099, LA).

Pace, C. R.: 1990, The Undergraduates (UCLA Center for the Study of Evaluation, LA).

Parsons, M.: 1990, 'Lone parent families and the socioeconomic achievement of children as adults', Journal of Comparative Family Students 21, pp. 353—367.

Pascarella, E. T. and P. T. Terenzini: 1991, How College Affects Students: Findings and Insights from Thirty Years of Research (Jossey-Bass, San Francisco).

Patton, M. J.: 1991, 'Qualitative research on college students: Philosophical and methodological comparison with quantitative approaches', Journal of College Student Development 32, pp. 389—396.

Patton, M. Q.: 1990, Qualitative Evaluation and Research Methods. 2nd Ed. (Sage, Newbury Park, CA).

Pedrini, D. T., D. L. Trichler, and B. C. Pedrini: 1984, 'Prediction of college freshman grade point average and attrition/persistent: ANOVA, MANOVA, MULREG, CANCOR', College Student Journal 18, pp. 18—27.

Persell, C. H., S. Catsambis, and P. W. Cookson Jr.: 1992, 'Family background, school type, and college attendance: Conjoint system of cultural capital transmission', Journal of Research on Adolescence 2(1), pp. 1—23.

Peterson, M. W., R. T. Blackburn, Z. F. Gamson, C. H. Arce, R. W. Davenport, and J. R. Mingle: 1978, Black Students on White Campuses: The Impact of Increased Black Enrollments (Institute for Social Research, University of Michigan, Ann Arbor, MI).

Pike, R. M.: 1981, 'Sociological research in higher education in English Canada, 1970—1980: A thematic review', Canadian Journal of Higher Education 21(2), pp. 1—25.

Pilot Quality Assessment: Working Document (Scotland), 1992.

Pines, A. M.: 1993, 'Burnout', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

Queen's University: 1992, Queen's Index: 20 Indicator of Performance (Queen's University, Kingston, Ontario, Special Supplement).

Rabkin, J. G.: 1993, 'Stress and psychiatric disorders', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd Ed. (Free Press, NY).

Ramsden, P. and N. J. Entwhistle: 1981, 'Effects of academic departments on students' approaches to studying', British Journal of Educational Psychology 51, pp. 368—383.

Ramsey, C. N. Jr. (ed.): 1989, Family Systems in Medicine (Guilford, NY).

Reiss, D.: 1981, The Family's Construction of Reality (Harvard University Press, Cambridge, MA).

Reiss, D.: 1989, 'Families and their paradigms: An ecologic approach to understanding the family and its social world', in C. N. Ramsey Jr. (ed.), Family Systems in Medicine (Guilford, NY).

Riegel, K. F.: 1975, 'Adult life crises: Toward a dialectic theory of development', in N. Datan and L. H. Ginsberg (eds.), Life-Span Developmental Psychology: Normal Life Crises (Academic, NY).

Robbins, S. B., K. P. Lese and S. M. Herrick: 1993, 'Interactions between goal instability and social support on college freshman adjustment', Journal of Counseling and Development 71, pp. 343—348.

Roberts, L. W. and R. A. Clifton: 1991, Measuring the quality of life of university students (University of Manitoba, Centre for Higher Education Research and Development, Winnipeg, Research Monograph Series, Vol. 1).

Roberts, L. W. and R. A. Clifton: 1992a, 'Measuring the affective quality of life of university students: The validation of an instrument', Social Indicators Research 27, pp. 113—137.

Roberts, L. W. and R. A. Clifton: 1992b, 'Measuring the cognitive domain of the quality of student life: An instrument for faculties of education', Canadian Journal of Education 17(2), pp. 176—191.

Rogers, R. F.: 1980, 'Theories underlying student development', in D. Creamer (ed.), Student Development in Higher Education (American College Personnel Association, Alexendia, VA).

Rossides, D. W.: 1976, The American Class System: An Introduction to Social Stratification (Houghton Mifflin, Boston).

Ryerse, C.: 1990, Child Poverty in Canada: A Review of the Effects of Poverty on Children (National Youth in Care Network, Ottawa).

Sabatelli, R. M.: 1984, 'The Marital Comparison Level Index: A measure for assessing

outcomes relative to expectations', Journal of Marriage and the Family 46, pp. 651–661.

Sanford, N.: 1962, 'Developmental status of the entering freshman', in N. Sanford (ed.), The American College (Wiley, NY).

Schutz, A. and T. Luckmann: 1973, The Structures of the Life-World (Northwestern University Press, Evanston, IL).

Schwartz, M. A. and O. P. Wiggins: 1986, 'Systems and the structuring of meaning: Contributions to a biopsychosocial medicine', American Journal of Psychiatry 143, pp. 1213–1221.

Schwartz, S. and B. G. Link: 1991, 'Sociological perspectives on mental health: An integrative approach', in D. Offer and M. Sabshin (eds.), The Diversity of Normal Behavior: Further Contributions to Normatology (Basic, NY).

Seeman, M.: 1991, 'Alienation and anomie', in J. P. Robinson, P. R. Shaver and L. S. Wrightman (eds.), Measures of Personality and Social Psychological Attitudes (Academic, NY).

Segall, M. H., D. T. Campbell and M. J. Merskovits: 1966, The Influence of Culture on Visual Perception (Bobbs-Merrill, Indianapolis, MN).

Sewell, W. H. and R. M. Hauser: 1980, 'The Wisconsin longitudinal study of social and psychological factors in aspirations and achievements', Research in Sociology of Education and Socialization 1.

Seymour, D. T.: 1992, On Q: Causing Quality in Higher Education (American Council on Education & Macmillan, NY).

Shalinsky, W. and C. Knapper: 1989, Perceptions of quality of student life at Waterloo (University of Waterloo, Waterloo, Ontario).

Shapiro, J. H. and D. Shapiro: 1983, 'Well being and relationship', in R. N. Walsh and D. H. Shapiro (eds.), Beyond Health and Normality: Explorations of Exceptional Psychological Well-Being (Van Nostrand Reinhold, NY).

Sherr, L. A. and D. J. Teeter (eds.): 1991, 'Total Quality Management in Higher Education', New Directions for Institutional Research 71.

Singer, J. L. and M. J. Opler: 1956, 'Contrasting patterns of fantasy and motility in Irish and Italian schizophrenics', Journal of Abnormal and Social Psychology 53, pp. 42–47.

Smith, D. C.: 1990, Principal's Discussion Paper "Queen's Learning Environment" (Queen's University, Kingston, Ontario).

Smith, D. H.: 1980, Admission and Retention Problems of Black Students at Seven Predominantly White Universities (National Advisory Committee on Black Higher Education and Black Colleges and Universities, Washington, D.C.).

Smith, S.: 1991, Report of the Commission of Inquiry on Canadian University Education (Association of Universities and Colleges of Canada, Ottawa).

Smith, T. E.: 1982, 'The case for parental transmission of educational goals: The importance of accurate offspring perception', Journal of Marriage and the Family 44, pp. 661–674.

Snyder, B. R.: 1966, 'The invisible curriculum', in L. E. Dennis and J. P. Kaufman (eds.), The College and the Students: An Assessment of Relationships and Responsibilities in Undergraduate Education by Administrators, Faculty Members, and Public Officials (American Council on Education, Washington, D.C.).

Snyder, B. R.: 1971, The Hidden Curriculum (Knopf, NY).

Solmon, L. C. and M. La Porte: 1986, 'The crisis of student quality in Higher education', Journal of Higher Education 57, pp. 370–392.

Stage, F. K.: 1988, 'Student typologies and the study of college outcomes', Review of Higher Education 11, pp. 247–257.

Stage, F. K.: 1989, 'College outcomes and student development: Filling the gaps', Review of Higher Education 12, pp. 293–304.

Stage, F. K. and R. V. Russell: 1992, 'Using method triangulation in college student research', Journal of College Student Development 33(6), pp. 485—491.

Stein, M. and A. H. Miller: 1993, 'Stress, the immune system, and health and illness', in L. Goldberger and S. Breznitz (eds.), Handbook of Stress: Theoretical and Clinical Aspects, 2nd ed. (Free Press, NY).

Sternberg, R. J. and R. K. Wagner (eds.): 1986, Practical Intelligence: Nature and Origin of Competence in the Everyday World (Cambridge University Press, Cambridge MA).

Strack, F., M. Argyle and N. Schwarz (eds.): 1991, Subjective Well-Being (Pergamon, Oxford, UK).

Stull, D. E.: 1987, 'Conceptualization and measurement of well-being', in E. F. Borgatta and J. V. Rhona (eds.), Critical Issues in Aging Policy (Sage, Newbury Park, CA).

Sutton, R. I. and R. L. Kahn: 1986, 'Prediction, understanding and control as antidotes to organizational stress', in F. M. Andrews (ed.), Research on the Quality of Life (Survey Research Center, University of Michigan, Ann Arbor, MI).

Task Force on University Accountability: 1993, University Accountability: A Strengthened Framework (Ministry of Education and Training, Toronto).

Terrell, M. C. and D. J. Wright (eds.): 1988, From Survival to Success: Promoting Minority Student Retention. National Association of Student Personnel Administrators.

Thomas, C. and D. Duszynski: 1973, 'Closeness to parents and family constellation in a prospective study of five disease states: Suicide, mental illness, malignant tumor, hypertension, and coronary heart disease', John Hopkins Medical Journal 134.

Tierney, W. G.: 1992a, Official Encouragement, Institutional Discouragement: Minorities in Academe — The Native American Experience (Ablex, Norwood, NJ).

Tierney, W. G.: 1992b, 'An anthropological analysis of student participation in college', Journal of Higher Education 63, pp. 603—618.

Tierney, W. G.: in press, 'The college experience of Native Americans: A critical analysis', in L. Weis and M. Fine (eds.), Beyond Silenced Voices: Class, Race and Gender in United States Schools (SUNY Press, Ithaca, NY).

Tinto, V.: 1987, Leaving College: Rethinking the Causes and Cures of Student Attrition (University of Chicago Press, Chicago).

Triche, C. W. III and D. S. Triche: 1975, The Euthanasia Controversy 1812—1974: A Bibliography with Select Annotations (Whitson, Troy, NY).

Trickett, P. K., J. L. Aber, V. Carlson and D. Cicchetti: 1991, 'Relationship of socioeconomic status to the etiology and developmental sequalae of physical child abuse', Developmental Psychology 27, pp. 148—158.

Tsang W.-S. and J. F. McDermott: 1981, Culture, Mind and Therapy: An Introduction to Cultural Psychiatry (Brunner/Mazel, NY).

Tweney, R. D., M. E. Doherty and C. R. Mynatt (eds.): 1981, On Scientific Thinking (Columbia University Press, NY).

University of Strathclyde: 1992, Report of an Academic Audit of the University of Strathclyde (Glasgow, Scotland).

University of Texas (Austin): 1988, The University of Texas at Austin Report of the Committee on Faculty-Student Relations (University of Texas, Austin).

Veenhoven, R.: 1984, Conditions of Happiness (Reidel, Dordrecht, Holland).

Webb, E. K., D. T. Campbell, L. Schwartz, L. Sechest, and J. B. Grove: 1981, Nonreactive Measures in the Social Sciences (Houghton Mifflin, Boston).

Webster, D. S.: 1992, 'Ranking of undergraduate education in U.S. News and World Report and Money', Change, March/April, pp. 19—31.

Weidman, J. C.: 1989, 'Undergraduate socialization: A conceptual approach', Higher Education 5, pp. 289—322.

Weiner, H.: 1981a, 'Brain, behavior and bodily disease: A summary', in H. Weiner, M.

A. Hofer and A. J. Stunkard (eds.), Brain, Behavior and Bodily Disease (Raven, NY).

Weiner, H.: 1981b, 'Social and psychological factors in disease', in E. R. Gove (ed.), Human Behavior (Lexington, Tennessee).

Weissman, M. and J. K. Myers: 1978, 'Affective disorders in a U.S. urban community: The use of research diagnostic criteria in an epidemiological survey', Archives of General Psychiatry 35, pp. 1304—1311.

Wheaton, B.: 1983, 'Stress, personal coping resources, and psychiatric symptoms: An investigation of an interactive model', Journal of Health and Social Behavior 24, pp. 208—229.

Wheeler, R. J.: 1991, 'The theoretical and empirical structure of general well-being', Social Indicators Research 24, pp. 71—79.

White, J. M.: 1992, 'Marital status and well-being in Canada', Journal of Family Issues 13(3), pp. 390—409.

Whitt, E.J.: 1991, 'Artful science: A primer on qualitative research methods', Journal of College Student Development 32, pp. 406—415.

Widick, C. and D. Simpson: 1978, 'Developmental concepts in college instruction', in C. Parker (ed.), Encouraging Development in College Students (University of Minnesota, Minneapolis, MN).

Williams, T and M. Batten: 1981, The Quality of School of Life (The Australian Council for Educational Research, Hawthorn, Victoria).

Williams, T. and W. Kornblum: 1985, Growing Up Poor (Lexington, Lexington, MA).

Witter, R. A., M. A. Okun, W. A. Stock and M. J. Haring: 1984, 'Education and subjective well-being: A meta-analysis', Educational Evaluation and Policy Analysis 6, pp. 165—173.

Zautra, A. and D. Goodhart: 1979, 'Quality of Life Indicators: A review of the literature', Community Mental Health Review 4(1), 1, pp. 3—10.

Zinn, M. B. and D. S. Eitzen: 1990, Diversity in Families. 2nd Ed. (Harper and Row, NY).

Zweigenhaft, R. L.: 1993, 'Prep school and public school graduates of Harvard: A longitudinal study of the accumulation of social and cultural capital', Journal of Higher Education 64, pp. 211—225.

Student Environmental Study Group,

University of Guelph,

ON N1G 2W1, Guelph,

Canada