Chapter 19
Australian Academics, Teaching and Research: History, Vexed Issues and Potential Changes

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19.1 Introduction

In Australia the question of what is an academic in terms of the work he or she is engaged in is very much alive. As the system is going through a period of extensive and most likely fundamental change, questions of work and identity are moving centre stage. As we discuss in this chapter, it is too early days yet to predict where the system will end up and how academic work will be conceptualised. But there is no doubt that an academic role in 5–10 years time will be different to what it is today.

To adequately capture the extent of change, it is important to understand where Australian universities and their academics are coming from. We therefore begin our analysis with a historical expose of how universities have evolved over the last 150+ years and how teaching and research have played a role in this. Following on from this, we briefly discuss recent policy initiatives that have a bearing on the relative balance between teaching and research in Australian universities, noting that the policy environment in this respect is ambivalent. Having thus set the scene at the macro level, we then turn to the questions of academic work and careers. We sketch the personnel structure that is relatively homogeneous across our universities and note the fact that casualisation is an important phenomenon in Australia. Turning to the CAP study, we provide a concise analysis of the relevant data followed by a discussion.

It is important to note that the CAP data was collected in 2007. The system has moved on and further study has been undertaken on the academic profession. We integrate this with the findings of the CAP study, highlighting the propensity for

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change and the innovations that are taking place in individual institutions when it comes to the relative roles and importance of the teaching and research functions in Australian academe.

19.2 The Historical Development of Higher Education in Terms of Teaching and Research

In 1850 Australia's first university, the University of Sydney, was established via the University of Sydney Act. This university represented a key institution of civil society and followed the transition of New South Wales from a British penal colony to self government. William Charles Wentworth, of the New South Wales Legislative Council, saw universities as essential to the growth of a self-governing society. Although strongly British in character, the University of Sydney broke with British tradition by admitting students based on academic merit rather than social class or religion. Wentworth argued that universities should provide the opportunity for 'the child of every class, to become great and useful in the destinies of his country' (quoted in The University of Sydney 2012). In 1852, The University of Melbourne was established as Australia's second university. Both Sydney and Melbourne universities were small, with initial cohorts of 16 and 24 students, respectively. They remained small for many decades and were staffed by a teaching professoriate with a generalist focus. They survived, despite their initially meagre enrolments, by later offering professional degrees (Macintyre and Marginson 2000). Two more universities were established in the nineteenth century, The University of Adelaide (1874) and the University of Tasmania (1890). By the beginning of the twentieth century, the six Australian colonies agreed on a constitution creating a single Federal state on 1 January 1901. At the time of federation, the four universities enrolled just 2,652 students, a tiny fraction of the 3.8 million Australian citizens (Solomon 2007, p. 157).

Within the first decade of federation, the two states without universities established universities bearing their state's title: the University of Queensland (1909) and The University of Western Australia (1911). The six pre-World War I universities have been labelled the 'sandstone universities' based on their distinctive architecture. The original university governing bodies did not support freedom of intellectual inquiry for fear that academics may not conform with community expectations, damaging institutional reputation. Universities began to develop their legitimacy as public institutions by contributing towards regional and national benefit. In the early twentieth century, universities started receiving state government funding to teach in suburban and regional areas, and new chairs were created in utilitarian disciplines, such as agriculture and industry (Macintyre and Marginson 2000, p. 56). Although serving their local geographies, the sandstone universities operated largely in isolation of each other, with little movement of staff or students between universities. This was partly due to geographic isolation and historical independence prior to federation in 1901 but also due to a predisposition to look to Britain for what was

considered of scientific, social and cultural value (Partridge 1968, p. 120). The sandstone universities were Australian in location, but British in their character. They were predominantly staffed by British (or British-educated) scholars, who taught British history, politics and literature. It was not until late 1946 that Sir Stephen Roberts became the first Australian-born Vice Chancellor at an Australian university, the University of Sydney (Conant 2010, p. 9).

In the four decades following federation, the Australian population roughly doubled to seven million, but university education remained inaccessible to the vast majority of ordinary Australians. In 1941, the six sandstone universities enrolled just 10,354 students (Solomon 2007, p. 157). The limited participation in university education partly reflected the general educational situation in Australia. At the time, it was rare for people to engage in education beyond what was immediately required in a largely agricultural industry. In the 1940s, only one in ten children completed their high school Leaving Certificate and less than 0.7 % of this group entered university education (Ashby 1946, p. 67).

In terms of the teaching and research responsibilities, teaching was the paramount activity for academics in Australian universities prior to World War II. Academics needed to be experts in their field, and this came through extensive reading of published work rather than publishing research oneself (Forsyth 2012, p. 59). The University of Sydney was the first Australian university to introduce the PhD in 1947, almost 100 years after the university was established (Dobson 2012). The PhD was initially resisted in arts and humanities, where the traditional British Master of Arts was considered the most relevant academic qualification.

The end of World War II saw unprecedented injection of Commonwealth Government (Federal) funds into the university sector. The Commonwealth provided temporal funding to educate ex-service personnel, but politicians also became interested in the social value of science and technology. The Australian National University (ANU) was established as a postgraduate research university in Canberra in 1946 with a specific focus on areas of research considered of national importance. The ANU was to receive its budget through a specific allocation from the Commonwealth Government, a unique position that remains to date. At around the same time, politicians in New South Wales considered that the best pathway for Australia to progress from an agricultural society to a modern and industrial society was through a rapid expansion in the training of engineers and technology workers. This required capacity beyond the existing University of Sydney and led to the creation of a second university in Sydney, the New South Wales University of Technology (in 1949).

The New South Wales University of Technology represented a new type of university, one which reflected the shift in how university teaching and research was expected to contribute to social and economic development. The University of Technology was inspired by the principles of American universities, with a specific dedication towards applied research. In fact, the label ‘university’ was contested in Federal parliament by Kim Beazley (snr): ‘There is no such thing as a ‘university of technology’. The term is a complete misnomer’ (quoted in Forsyth 2012, p. 84). The University of Sydney also contested its establishment based on its perceived

subservience to government and industry priorities, though perhaps also due to the competition it would provide in a zero-sum game of government research funding (O'Farrell 1999, p. 19). By 1958 the University of Technology had changed its name to the University of New South Wales (UNSW) as it sought to broaden its disciplinary bases and become a comprehensive research university.

An interesting outsider's account of Australian universities at around this time was provided by James Conant, President of Harvard University. In July and August of 1951, Conant travelled to Australia and was commissioned to provide a confidential report to the Carnegie Foundation on the state of Australian universities. According to Conant, Australian academics routinely reported their core role to be the 'holding of academic standards', primarily through course preparation, setting examinations and correcting student papers (Conant 2010, p. 9). Conant bluntly concluded that Australian universities had done little beyond training doctors, lawyers and teachers, who may have anyway been better trained in professional settings (p. 13). Compared to leading American universities, he considered university teaching was underfunded, though also cheaper to implement due to the lecture-based approach and the lesser need to outlay as much money for research, given its lesser role. With few exceptions the most outstanding Australian scientists and scholars went to Britain or elsewhere in the Commonwealth to make their scientific contributions. For Australian universities to match the standard of better-endowed private and state-funded American universities, he considered they needed a three- or fourfold increase in funding.

Soon after Conant's report, Australian universities benefited from a further increase in government funding, primarily from the Commonwealth Government. Commonwealth funding as a proportion of university income had already increased from nothing in 1939 to one-fifth by 1951 (Macintyre and Marginson 2000, p. 61). In the mid-1950s, Prime Minister Sir Robert Menzies established the Murray Committee to inquire into the needs of universities. The Murray Committee recommended an almost doubling of Commonwealth funding and the establishment of an Australian Universities Grants Committee as an advisory body for government on university matters. By 1961, the Commonwealth had surpassed the state governments as the major funder of universities, providing 43 % of their income (Macintyre and Marginson 2000, p. 61). The mid-1950s also saw the University of New England became independent of the University of Sydney (in 1954) and a second university established in Melbourne, Monash University (in 1958). By 1960, the then ten Australian universities enrolled 54,000 students (DETYA 2001).

The increasing number of students enrolled in universities, reaching 76,000 enrolments by 1964 (DETYA 2001), raised many challenges for how Australian universities were to fulfil their educational missions. In the mid-1960s, the Committee on the Future of Tertiary Education in Australia (the Martin Committee) recommended the creation of colleges of advanced education (CAEs) as vocational and teaching-oriented institutions. Teaching and research was considered inseparable to university education, but not for CAE education which was narrower in focus and directed towards areas of immediate skills shortages. This had clear differential funding consequences, whereby universities were funded according to the cost of the research-teaching nexus, while CAEs were not. This placed CAEs in a subordinate

position to universities and was the substance of Australia's binary higher education policy which operated until the late 1980s. Higher education enrolments (including CAEs) reached 161,000 students by 1970, representing a trebling over the decade (DETYA 2001).

Despite the rapid increase in enrolment, higher education remained a privileged activity well into the 1970s. Only 3 % of the Australian adult population held higher education qualifications in the 1970s (Norton 2012, p. 5). Participation continued to grow throughout the decade, but the envisaged role of CAEs as the main engines for enrolment growth did not eventuate. By the mid-1970s, the CAEs began to focus more on degree-level and postgraduate programmes, leaving the Technical and Further Education (TAFE) sector to absorb the responsibilities for sub-diploma programmes. The 1973–1974 Whitlam Government dramatically changed the funding structure of higher education, abolishing tuition fees and essentially making the Commonwealth fully responsible for funding universities. After these reforms, the Commonwealth was providing 98 % of the income of tertiary education institutions (Solomon 2007, p. 161). By 1978, there were 310,000 students across 19 universities and 70 CAEs, with slightly more students enrolled in universities (DETYA 2001).

Throughout the 1970s and 1980s, policymakers and university leaders became concerned about the future of Australian higher education, which was essentially facing a transition from an elite to a mass system. In 1978, the Commonwealth established a commission to investigate the possible rationalisation of the higher education system, but in 1981 the Commonwealth pre-empted the results of this process announcing that 30 CAEs needed to be amalgamated or face no further Commonwealth funding. By 1983 there were 47 CAEs (down from 70 in 1978), and another commission was established to investigate the efficiency and effectiveness of the tertiary education sector. This commission later recommended a further commission to review the binary structure of the sector. This culminated in 1988 in a Commonwealth Government White Paper and, under the leadership of Labor Government Education Minister John Dawkins, a series of reforms that removed the binary divide between universities and CAEs and established the Unified National System. Following the mergers and amalgamation of CAEs into universities, the number of universities roughly doubled, from 19 in 1987 to 37 in 1992. The removal of the binary divide had immediate consequences to the academic profession as a large number of teaching-focused college staff were transferred to academic employment classifications and expected to become research active, which was a challenge (see below). Over the same period, the number of students increased from 394,000 to 559,000 (DETYA 2001).

The Dawkins reforms also changed the balances between sources of university income, continuing a consistent decline since the early 1980s in Commonwealth funding on a per student basis. The reintroduction of tuition fees for domestic students in 1989 via an income-contingent loan scheme saw universities generate an increasing share of income through fees. Universities were also unrestricted in the number of international students they enrolled and their level of tuition fees (Norton 2012, pp. 20–21). Double-digit growth rates for international student enrolments became common as international students increased from 5 % of total enrolments

in 1990 (25,000 out of 485,000 students) to 14 % by 2000 (96,000 out of 695,000 students) (DETYA 2001). Whereas the Commonwealth contributed 82 % of university revenue in 1989, by 2000 it contributed less than half of university revenue (Solomon 2007, p. 163). The bulk of the decline in Commonwealth funding was absorbed by students through tuition fees (and higher education loans) and other fees (Bradley et al. 2008a, p. 11). By the time of the CAP survey in 2007, the number of students exceeded one million, and students contributed around 40 % of university revenue, almost equalling the Commonwealth contribution (Bradley, et al. 2008a, p. 11). Just over a quarter of all students were international, and their fees contributed about 40 % of all student revenue, making Australian universities highly dependent on the international student market.

The dramatic increase in students has not been matched by recruitment of academic staff in continuing and fixed-term positions. In full-time equivalent (FTE) terms, the number of academic staff in such positions increased by 17 % between 1996 and 2007 (DEEWR 2007), compared to an approximately two-thirds increase in number of enrolled students over the same period (Norton 2012). The ratio of FTE students to FTE academic staff in teaching functions increased from 13:1 in 1990 to 16:1 in 1996, before roughly stabilising at 21:1 since 2003 (Group of Eight 2011; Universities Australia 2008). These broad figures would suggest that the growth in student enrolments has been partly absorbed by larger class sizes and heavier teaching loads, but the true picture is more complex. The number of academics on continuing and fixed-term contracts in combined research and teaching positions (FTE) increased by only 3 % between 1996 and 2007 compared to a 54 % increase in research-only positions. Teaching-only positions were flat over the same period, but this is primarily because teaching is often conducted by academics on casual (hourly) contracts. The number of casual employees (FTE) increased by 44 % from 1996 to 2007. In other words, the growth in student numbers and increasing reliance on revenue from domestic and particularly international students have coincided with the emergence of more specialised research-only and teaching-only career paths. This to an extent is challenging the original notion that academic careers in Australia require a balance between teaching and research. This is discussed further in the next section.

19.3 Policy Initiatives to Balance or to Emphasise Either Teaching or Research

All Australian universities must comply with a set of national regulations in order to be allowed to use the ‘university’ label. Until recently these regulations consisted of the National Protocols for Higher Education. Amongst other things, the protocols required universities to support free inquiry in research leading to the creation of new knowledge and to demonstrate that a culture of sustained scholarship informed their teaching (Ministerial Council on Education 2007). The underlying principle

for the protocols was the centrality of the traditional Humboldtian teaching and research nexus, effectively prohibiting teaching-only institutions from using the university label. Following the Bradley Review and the government's policy response, the Australian Universities Quality Agency (AUQA) was replaced with the Tertiary Education Quality and Standards Agency (TEQSA) in a move to create a more explicit standards-based approach to tertiary education. Five sets of standards are in the process of being developed, comprising provider standards, qualification standards, teaching and learning standards, research standards and information standards. The provider standards operating since 2011 are somewhat different from the National Protocols in that they introduce the 'university college' species and reaffirm the possibility of 'university of specialisation' introduced in the mid-2000s by the Coalition Government. Australian universities under the current provider standards are broad-based undergraduate institutions with higher research degree programmes in at least three of the disciplines it offers (Standard 2.1). Also, they 'undertake research that leads to the creation of new knowledge and original creative endeavour at least in those broad fields of study in which masters degrees (research) and doctoral degrees (research) are offered' (Standard 2.3). One way to interpret this is that it confirms the essential teaching-research orientation identified above for Australian universities. Another interpretation is that it allows universities the possibility to have essentially teaching-only disciplines (supported through scholarship in all fields of studies [Standard 2.5]) next to research-based disciplines, implying that academic staff need not be research active in these disciplines.

This approach reflects the fact that not all Australian universities are engaged in research to an equal extent. The Group of Eight (Go8) is an institutional grouping of Australia's most research-intensive universities which absorbs roughly double the combined spending of the other universities on research (Bradley et al. 2008a, p. 47). And the recent research assessments (the Excellence in Research for Australia (ERA) 2010 and 2012 (Australian Research Council 2011, 2012)) identify a tail of universities that have hardly any research at 'world standard' level – the benchmark used in the ERA assessments. What emerges from these assessments is the existence of a group of nine very research-intensive universities, a group of some twenty universities that have strengths in a significant number of disciplines and a group of some ten universities that could not be described as research intensive.

Does this mean that Australia is starting to move away from 'research based' as the defining characteristic of what a university is and by extension what academics are and do? It certainly is too early to assert that this is what is happening, although we will pick up on this in our final discussion section. And there are policy initiatives that would point in the opposite direction, one being the creation of the Collaborative Research Networks that are established to help less research-intensive universities develop a research basis through collaboration with their research-intensive colleague institutions (Commonwealth of Australia, 2009). The most appropriate conclusion so far would be that balancing or emphasising teaching and/or research in Australia is an area wrought with complexities and will remain so in the foreseeable future.

19.4 Faculty Personnel Systems

Australian universities do not have a formal tenure system. Academics employed on continuing contracts will generally have a probationary period of between 3 and 7 years (May 2011). All other academics have no formal expectation for ongoing employment beyond the duration of their contract. Fixed-term (limited-term) contracts are typically used for research-only positions on externally funded projects, such as postdoctoral research fellowships. Casual contracts are typically utilised for teaching-only positions and paid on an hourly basis. They may include regular teaching for a semester's duration (a 'sessional' contract) or be a one-off guest lecture. Casual academics may be dismissed with one hour's notice and are not entitled to sick leave and other entitlements, but are provided additional compensation (generally about 25 % of the hourly rate). Casual academics were not included in the CAP survey.

Academics on continuing or fixed-term contracts are employed in academic ranks ranging from Level A (lecturer/research fellow) to Level E (professor). With the exception of Level E, most academic ranks include four to eight salary increments (steps), with annual salary increases to the next increment based on satisfactory performance. Academics are eligible to apply for merit-based internal promotion to higher ranks, which are reviewed by a university committee comprising internal and external peers. 'Out-of-round promotion' may also be offered based on a counter-offer from a competing institution (Winchester et al. 2006). Fixed-term contract academics are eligible to apply for promotion but face practical problems such as required years of continuous employment or limitations based on the external funding of their positions. Casual academics are explicitly excluded from internal promotion.

Merit-based promotion is judged based on internal procedures for satisfactory performance, which will vary from institution to institution depending on the assigned workloads for teaching, research and service/leadership. Some universities set the relative weightings across duties, while others allow applicants to specify their own weightings (Winchester et al. 2006, p. 510). Academics who apply for internal promotion are usually successful, though promotion by no means is guaranteed. A 2011 survey found that 41 % of academics on continuing and fixed-term contracts had applied for internal promotion within the past 5 years, with 84 % successful on at least one occasion (Strachan et al. 2012). The usual pathway to promotion is sequential, after spending 5–6 years in the preceding rank, except for promotion to Level B which effectively operates as an entry level for some continuing and fixed-term positions (Strachan et al. 2012).

Although research and teaching are considered equally important by universities for promotion, perceptions are that research is the 'real' criterion (Winchester et al. 2006). These perceptions may or may not reflect the reality, but the differential career pathways for teaching-only versus research-only academics imply a lower value placed on teaching duties. Remuneration for casual teaching is nearer the bottom of the academic pay scale, usually the middle increments of the Level A salary scale or lower increments of the Level B salary scale. By comparison, the research-only

career pathway may potentially reach Level E (professorial fellow/research professor). In other words, one can become a professor without doing teaching but will struggle to gain promotion above the bottom ranks without performing research.

19.5 CAP Results for Teaching and Research Activities in Australia

The following section presents the CAP results for teaching and research activities for academics whose primary activities are teaching, research or both duties. This is determined by self-reported time use across both the teaching and nonteaching periods. Universities in Australia typically operate with two 14-week teaching semesters, meaning teaching is in session for roughly two-thirds of the working year. The CAP survey asked respondents for their typical working hour divisions separately for the teaching and nonteaching period. Therefore, we weight the working estimates for the teaching period as double the nonteaching period, providing an annualised estimate of teaching and research time.

It should be noted that 13 % of the Australian sample report spending less than half of their time on teaching and research. These academics are more likely to be located in higher academic ranks and are primarily engaged in university administration. One quarter of all Level E academics reported spending the majority of their time on other duties, compared to less than ten percent of those in Level B and below. Although academics whose primary duties are not teaching or research perform particular functions within Australian universities, such academics likely hold additional leadership and service positions within or outside the university. For the purpose of examining teaching and research workloads for typical academics, they are excluded from the sample as their results skew the data.

Consistent with the Humboldtian ideal, academics in continuing and fixed-term positions spend, on average, roughly equal amounts of time on teaching (36 %) and research (37 %). However, this masks diversity across universities. On average, academics in the Go8 research-intensive universities spend close to half of their time on research (44 %) and less than a third of their time on teaching (31 %). By contrast, academics in the Australian Technology Network of Universities (ATN) and other universities spend, on average, more time teaching (39 and 40 %) compared to research (33 and 32 %). These working time distributions reflect the different histories and positions of universities, whereby the Go8 universities have stronger research traditions, supervise more PhDs and dominate the external competitive research funding. Academics working in the Go8 perhaps share more in common with universities identified as having stronger research traditions (e.g. Germany, Norway, Japan, Italy, the Netherlands and Korea). Table 19.1 shows the proportion of time spent on teaching and research across university categories, for those academics who reported spending the majority of their time on teaching and research.

Traditionally, academics in Australian universities have been employed in combined teaching and research positions. Such positions have been assumed to

Table 19.1 Mean number of hours dedicated to teaching and research

	Teaching	Research	n
Go8	31	44	248
ATN	39	33	120
Other	40	32	219
All	36	37	587

Notes: The teaching and research hours are a proportion of total hours combined across the teaching and non-teaching periods, by university type

Table 19.2 Mean proportion of academics by time-use classification and university type

	Research-focused	Balanced	Teaching-focused	Total	n
Go8	43	32	25	100	248
ATN	24	33	43	100	120
Other	25	27	48	100	219
Total	32	30	37	100	587

entail a roughly equal division of time between teaching and research/scholarship, and these principles are still present in some enterprise bargaining agreement workload clauses. In some Go8 universities, a 40:40:20 ratio is stated as the starting point for discussions over workload divisions between teaching, research and other duties (e.g. administration and service). However, under the National Protocols, research and teaching are institutional responsibilities, not individual responsibilities. Many academics will not be engaged in both activities, and in some universities combined positions may include the equivalent of 1 day per week for research. Given that combined positions have also been in steady decline, the practical importance of the 40:40:20 ratio has diminished considerably.

An alternative approach used in this chapter is to classify academics into categories based on the time they report spending on teaching and research rather than their workload classification. We classify academics according to the ratio of time spent on teaching versus research. Academics spending at least 50 % more hours on teaching compared to research (e.g. 1.5 h teaching per research hour) are classified as 'teaching focused'. Likewise, academics spending 50 % more time on research are classified as 'research focused'. The remaining group is considered to have a 'balanced' workload. Roughly one-third of all fixed-term and continuing academics fall into each of these three categories. However, as shown in Table 19.2, academics in Go8 universities are almost twice as likely to be in research-focused positions compared to teaching-focused positions, while the opposite is the case in the non-Go8 universities. This may be partly the result of the high concentration of competitive research funding in the Go8 which can be used for research-only fixed-term staff.

For academics on fixed-term and continuing contracts, the balance between teaching and research is strongly related to academic rank. The proportion of academics in research-focused positions steadily increases with rank, from one-fifth of all Level B academics to close to two-thirds of all academics in Level E.

Table 19.3 Mean proportion of academics by time-use classification and academic rank

	Research-focused	Balanced	Teaching-focused	Total	n
Level E	62	30	8	100	50
Level D	50	36	14	100	72
Level C	25	29	45	100	150
Level B	21	33	46	100	245
Level A	50	14	36	100	66
Total	33	30	37	100	583

The opposite is the case for teaching-focused positions. Almost half of all academics in Levels B and C are in teaching-focused positions, compared to less than one-tenth of Level E academics. The proportion of academics with balanced workloads is stable across ranks above Level B at roughly one-third. Academics in the lowest rank (Level A) are mostly likely to be in research-focused or teaching-focused positions rather than combined positions with balanced workloads. The distribution of academics based on their time-use classification and academic rank is shown in Table 19.3.

The lack of longitudinal data means we cannot assume that academics spending a greater proportion of their time on teaching face barriers to promotion beyond Level C. Academics may shift their working preferences away from teaching as they are promoted. Additionally, higher-ranked positions require greater time devotion to leadership and administration, which probably comes through the delegation of teaching duties rather than a reduced commitment to research, thus creating a relatively stronger research focus. However, there is some evidence to suggest that the teaching-focused career pathway is less amenable to promotion. Teaching-focused academics reported an average of 14 years experience in the higher education and research sector, identical to other academics. In other words, teaching-focused academics are not concentrated in lower ranks due to less experience. Teaching-focused academics are also no different to those with balanced workloads in terms of their years of experience within their current institution. Teaching-focused academics appear to simply spend more time at their current rank compared to others. Academics in teaching-focused positions report having spent an average of 6 years at their current rank in their institution compared to 4 years for those with balanced workloads and 3 years for research-focused academics. Differences in means across the three groups are highly significant (ANOVA, $p<0.000$). These results are presented in Table 19.4.

The fact that academics in research-focused positions have spent fewer years in their current rank does not necessarily mean they are more quickly promoted than academics engaged in teaching. Research-focused academics are more likely to report fixed-term contract employment. Whereas 80 % of academics in balanced positions and 77 % of teaching-focused academics report continuing contracts, only 53 % of research-focused academics have continuing contracts. In the lowest ranks (Level A and B) the division is even more pronounced, with 13 % of research-focused academics on continuing contracts compared to the majority of balanced

Table 19.4 Academic time-use classification by years of employment

	Research-focused	Balanced	Teaching-focused	ANOVA sig.
Years since your first full-time appointment in higher education/research sector	13.6	13.8	13.7	0.976
Years at your current institution	7.9	9.7	9.6	0.057
Years at your current rank at your current institution	3.4	4.3	5.9	0.000

Table 19.5 Mean research output by time-use classification

	Research-focused	Balanced	Teaching-focused	Total	ANOVA sig.
Book authored	0.3	0.3	0.2	0.3	0.046
Book edited	0.3	0.2	0.1	0.2	0.002
Articles	11.9	6.5	3.6	7.4	0.000
Reports	1.8	0.9	0.7	1.2	0.003
Conference papers	8.1	5.9	3.8	6.0	0.000
n	182	167	174	523	

and teaching-focused academics (52 % in each category). Research-focused academics are probably more likely to move between institutions at the same rank, or temporarily outside the university sector, leading to fewer years at the current rank of the current institution, but not necessarily fewer years at the given rank. The relatively few academics in Level B who are mostly engaged in research may also reflect the 'postdoc treadmill' of short-term research-only contracts in lower academic ranks (Coates et al. 2009).

It is more difficult to explain why teaching-focused academics differ from academics in balanced positions in their years at current rank. Post hoc tests of mean differences of years at current rank show that mean differences between teaching-focused and balanced academics are statistically significant (ANOVA Games-Howell, $p<0.01$), but mean differences between balanced and research-focused academics are not significant ($p>0.05$). It may be that a lack of time dedicated to research by teaching-focused academics is a barrier to promotion, but the additional hours spent on research by research-focused academics have less effect on promotion. This is probably because institutions have stronger research expectations of research-focused academics, given they spend more time on this activity and many would be on the research-only career track.

In terms of publishing, the relative time spent on research is strongly associated with the number of publications. As shown in Table 19.5, research-focused academics have the highest mean levels of publishing across all scientific publication types: books, articles/chapters, reports and conference papers. This is not surprising given that research-focused academics tend to be in higher academic ranks. A detailed study of the CAP and 1992 Carnegie data found that academic rank was consistently the strongest predictor of scientific publishing in Australia (Bentley 2012). Research hours were also significant predictors in that study, but teaching hours were

Table 19.6 Proportion of academics agreeing with the following statements on research and teaching, by time-use classification

	Research-focused	Balanced	Teaching-focused	n
Teaching and research are hardly compatible with each other	21	28	37	577
Your research activities reinforce your teaching	82	78	69	528
You spend more time than you would like teaching basic skills due to student deficiencies	53	66	65	531

Table 19.7 Mean proportion of teaching time dedicated to each level of education, by time-use classification

	Research-focused	Balanced	Teaching-focused	Total
Undergraduate programmes	54	67	74	66
Master programmes	17	16	16	16
Doctoral programmes	25	12	5	13
Other programmes	3	4	3	3
Total	100	100	100	100
n	150	173	200	523

not significant. This supports Dever and Morrison's (2009) study of highly publishing academic women who tend not to find teaching as a barrier to their research performance.

Research commitments are rarely cited as a hindrance to teaching, but two-thirds of academics surveyed by McInnis (1999, p. 34) reported teaching loads as a hindrance to research. Most Australian academics in the CAP survey do not believe that teaching and research are incompatible, but academics in teaching-focused positions hold less positive views than others. Over one-third of teaching-focused academics find the activities incompatible (37 %) compared to just over one quarter of academic with balanced workloads (28 %) and one-fifth of research-focused academics (21 %). The vast majority of academics believe that their research reinforces their teaching, but again agreement is strongest amongst academics with research-focused (82 %) and balanced workloads (78 %) compared to teaching-focused academics (69 %). Research-focused academics are also less likely to agree that they spent more time than they would like teaching basic skills due to student deficiencies. However, given they tend to spend less time teaching overall, their more positive views on teaching may be due to their minimal engagement in this activity (Table 19.6).

Research-focused academics do not just spend less of their time teaching, they are also less likely to be teaching large undergraduate classes. As shown in Table 19.7, undergraduate programmes comprise roughly two-thirds of all teaching hours for most academics. However, for research-focused academics undergraduate teaching comprises only just over one-half of their teaching time. The different patterns of undergraduate and postgraduate teaching undoubtedly relate to the rank

Table 19.8 Relative interest in teaching and research, by time-use classification

	Research-focused	Balanced	Teaching-focused	Total
Primarily in teaching	1	2	17	7
In both, but leaning towards teaching	7	26	44	26
In both, but leaning towards research	45	59	29	43
Primarily in research	47	14	9	23
Total	100	100	100	100
n	190	176	213	579

and qualifications of research-focused academics. Less than one-third of all teaching-focused academics supervise research teams or research assistants compared to half of all academics with balanced workloads and two-thirds of research-focused academics. Research-focused academics also teach smaller undergraduate courses with a median enrolment of 100 students compared to 200 students in the courses taught by other academics. The smaller class sizes may be the underlying reason for having a research-focused workload, while the relatively stronger focus of teaching in doctoral programmes probably also unpins their more positive views on the complimentary relationship between teaching and research.

It is common knowledge that some academics are more motivated towards research. Cole and Cole (1973) describe the 'sacred spark' or inner compulsion some academics have towards research. Research time is partly a residual category based on the working hours that remain after all formally assigned work has been completed, and partly discretionary based on whether one prefers to trade leisure for work. A previous study of research time based on the CAP data found that relative interest in research was the strongest predictor of research hours in Australia and most other countries (Bentley and Kyvik 2012b). Gottlieb and Keith's (1997) study based on the 1992 Carnegie data showed similar results for research hours, but they additionally examined factors associated with teaching hours. Their results indicated that the relationship between interest in teaching and teaching hours was weaker than the relationship with research hours. This is probably because academics deeply engaged in research generally work longer hours, thus trading leisure for work. The cross-tabulated results in Table 19.8 show that research-focused academics overwhelmingly report a stronger interest in research, while most teaching-focused academics report stronger interests in teaching. The vast majority of academics with balanced workloads share an interest in both teaching and research (85 %). The importance of these results is that diversity in teaching and research hours matches self-reported interest in these activities for most academics, though there are many academics interested in research who are in teaching-focused positions.

19.6 Discussion

The previous analysis of the CAP data shows that in Australia there has been a decrease in the proportion of academics employed in combined teaching and research positions. Teaching and research are increasingly being performed by

specialised academics, with separate career paths. The tendency has been for teaching-only academics to be employed in casual contracts, with very limited formal career pathways or opportunities for promotion. The trend in the research-only track has been fixed-term contracts. Although job security and access to promotion remain strongest for those in combined research and teaching positions, comparably few such positions have been created over the past two decades. One of the core findings of this chapter is that academics in combined positions are very diverse, including teaching-focused academics with only limited engagement in research and publishing. It is probable that academics in combined positions will become more diverse, with research time distributed towards those academics with demonstrated research potential or outputs and heavier teaching loads for research-inactive staff in combined positions. Such trends are already becoming part of enterprise bargaining agreement negotiations, further weakening the relevance of the traditional 40:40:20 workload distribution between teaching, research and other duties.

Coates and Goedegebuure (2012) argue that as higher education grows in size and complexity, academic work progressively becomes more differentiated and this requires the core academic functions to move freely together (or apart). In turn, this requires a reconceptualising of academic work beyond the crude 'research active' and 'non-active' conceptualisations and the traditional notion that all academics in combined positions should be engaged in teaching and research equally. They present 'academic career profiles' including a range of possible workload divisions, including senior academic leaders who spend most of their time on management and leadership. In many ways, the data presented in this chapter indicates that diverse career profiles already existed at the time of the CAP survey in 2007. One quarter of all Level E academics were not included in the sample used in this chapter precisely because they represented senior academics in leadership roles which do not require active engagement in research and teaching. The remaining sample of academics differed in their engagement in teaching and research, partly reflecting the relative interests in these activities.

The reconceptualising of academic work means the 40:40:20 principle has become increasingly obsolete for academics in combined positions, particularly outside the Go8 universities. For example, Curtin University of Technology employees will soon vote on a new enterprise bargaining agreement which expands the definition of combined teaching and research positions to include subcategories for 'research emphasis' and 'teaching emphasis'. Academics with a research emphasis can expect a teaching workload of 40–50 % and a research workload of 30–40 %. Academics in teaching-focused positions may have a teaching workload of up to 60 % and a research workload of 20 %. Essentially the 40:40:20 ratio represents an upper limit for research engagement under these changes. By contrast, staff at Central Queensland University (CQU) will soon vote on a new enterprise agreement which will divide academics into five categories, including a 10 % teaching load for the most effective researchers in combined positions (Rowbotham 2012). At the Australian Catholic University, there is even greater diversity, with the possibility of research-only staff being assigned teaching duties. The great diversity within and between universities in what is considered a reasonable balance between teaching and research makes it difficult to generalise a typical workload pattern for

academics based on their employment classification. Estimates about student-staff ratios and the proportion of teaching completed by casual staff typically assume academics with common labels (e.g. teaching-only, teaching and research or research only) spend the common proportions of time on teaching (e.g. 100 %, 40 % and zero percent, respectively). However, this is clearly not the case.

Although new enterprise bargaining agreements demonstrate a formal reconfiguration of academic work for existing academics, it is unclear whether these changes will make academic work more attractive to potential entrants. According to the Australian Technology Network of Universities, attracting and retaining high-quality academic staff is 'the single biggest issue confronting the sector over the next decade' (ATN in Bradley et al. 2008b, p. 22). Like other countries, Australian universities have an ageing demographic profile. Almost half of all senior academics (associate professors and professors) are expected to retire over the coming decade (Coates et al. 2009). The relative weak growth in recruitment over the past decades has meant that there are relatively few academics under the age of 40. This has been labelled the 'lost generation' of academics (Hugo 2008). There are concerns that aspiring academics have been dissuaded to commit to an academic career, with half of all domestic PhD graduates preferring to work outside the university sector (Bexley et al. 2011). The replenishing of the academic workforce is also very likely to coincide with substantial growth in demand for tertiary qualifications (Hugo and Morriss 2010).

The Commonwealth Government's 2008 *Review of Australian Higher Education* (the 'Bradley Review') acknowledged that the quality and capacity of the academic workforce is critical to meet Australia's long-term needs for a qualified labour force. The Bradley Review recommended urgent attention and proposed three strategies for improving the attractiveness of the academic profession: increase the number of home-grown academics through more training of postgraduate researchers, improve the relative attractiveness of working conditions and offer greater job security and flexibility (Bradley et al. 2008b, pp. 22–25). Academics are drawn to the profession out of their commitment to scholarship rather than salary or job security, but the rejuvenation of the academic profession has probably been hampered by relatively low academic salaries. From an international perspective, Australian academic salaries compare favourably with other English-speaking countries (Coates et al. 2009). Australian universities strongly benefit from migration; over 40 % of the academic workforce is foreign-born (Hugo and Morriss 2010). However, compared to other full-time jobs in Australia, academic salaries have declined (Horsley and Woodburne 2005). Salary is reported as one of the strongest weaknesses of an academic career from both academics (Bexley et al. 2011) and research higher degree students (Edwards et al. 2011). The greatest decline in salary relativities has been in the lowest and highest academic ranks (Coates et al. 2009), but the deterioration in the lowest academic ranks is particularly troublesome because it has been compounded with job insecurity through casualisation and fixed-term contracts.

The National Tertiary Education Union (NTEU) estimates that casually employed academics are responsible for more than half of all undergraduate teaching (Rea 2012). The use of casual positions for undergraduate teaching has been charged

with creating an 'underclass' of workers with a high level of job insecurity, low wages and poor working conditions (Kimber 2003). May and colleagues (2011) claim that many of the 'lost generation' of younger academics were not lost to academia, but were consigned to casual teaching roles. Not all casual employment is involuntary, but academics preferring casual employment tend to hold additional full-time professional positions elsewhere or are entering retirement (Junor 2004). Job security is a concern for the bulk of the casual teaching workforce and the most frequent issue raised by casual academics (Bexley et al. 2012). The extent of involuntary casual employment was revealed by a recent survey of 2,900 casually employed academics (Strachan, et al. 2012). Only one-tenth of those surveyed preferred casual employment in the medium-term future (5 years), with a majority (54 %) preferring continuing appointment and just over one-fifth (22 %) preferring work outside the university sector.

There is no way to know what proportion of academics currently employed in casual contracts (preferring secure employment) will ultimately gain secure positions. One of the strongest criticisms is that Level A positions no longer offer an entry point to an academic career, but just a 'revolving door' of casual and fixed-term employment (May et al. 2011). Regular casual contracts are common, most casuals report being employed at their university for more than 1 year (62 %), and almost three quarters believed that they will probably be employed on a casual basis in the subsequent year (Strachan et al. 2012). In cases where there is an implicit expectation for ongoing employment, there are strong arguments to convert casual positions into merit-based fixed-term or continuous employment positions (Coates and Goedegebuure 2012; Junor 2004).

On the surface it seems that universities gain the ongoing commitment of casuals without offering any formal commitment to ongoing employment. The same may be said for research-only academics on the postdoc 'treadmill' of regular fixed-term contracts which do not lead to tenured positions (Coates et al. 2009). However, there are also costs to universities in terms of the quality of academic staff. Edwards and colleagues (2011, p. 40) believe that the lack of perceived availability of academic positions amongst research higher degree students may be a core reason for aspiring academics to pragmatically switch their career preferences away from academia. Perhaps more importantly, the perceived low salaries and lack of career opportunities within academia, combined with the poverty-level Australian Postgraduate Award scholarship scheme (Palmer 2011), probably discourage many of the most capable researchers from even contemplating academic careers in Australia.

The role of casual employment should not be viewed entirely from a negative standpoint. Flexible contracts help universities manage fluctuations in student enrolment and research funding. The need for flexibility has become particularly important given the inexorable decline in guaranteed Commonwealth funding and reliance on student contributions. For individual academics, casual positions often lead towards regular employment. For example, the vast majority of academics on fixed-term and continuing contracts have spent some time employed casually either during their PhD (82 %) or afterwards (45 %) (Strachan et al. 2012, p. 41). Furthermore, academics in casual positions are no less satisfied with their positions

than those in secure positions. Seventy-eight percent of casuals report being satisfied with their jobs compared to 69 % of fixed-term and continuing academics (Strachan et al. 2012). A clear majority (62 %) of casuals also agreed that casual work allows them to balance their work and home life.

However, the lack of commitment to ongoing employment also increases the demands for effective human resource management practices. Contracts must be renewed, and performance measures should be designed to ensure that the most capable people enter the academic profession and the most effective remain. Unfortunately many of these human resource management functions are conducted informally by individual academics on an ad hoc basis. Most universities cannot even estimate the proportion of teaching conducted by casuals because their employment is not recorded centrally on human resource systems (Percy et al. 2008). The vast majority of academics in casual positions obtained their position either through their friends (36 %), an approach to the department (31 %) or through their supervisor (16 %) rather than through an advertised and competitive process (8 %) (Strachan et al. 2012). The relative decline in the number of continuing positions means that the majority of academic staff on continuing or fixed-term contracts report supervising casual staff each semester (Strachan et al. 2012, p. 38). This probably also leaves a heavier administrative burden on senior academic staff, as demonstrated by the long administrative hours in Australia compared to other countries (Bentley and Kyvik 2012a).

Essentially, casuals are employed to perform one of the most important functions of universities to society – the teaching of undergraduate students – but are not subject to formal competitive processes for recruitment or performance management. These processes strongly lend themselves to bias, favouritism and patronage rather than merit (Martin 2009). In a plan to reduce dependency on casual teachers, Curtin University plans to introduce Scholarly Teaching Fellow positions (up to 75 % teaching duties) as an explicit strategy for converting casual teaching positions into merit-based appointments on continuing or fixed-term contracts. While this addresses many of the problems of a lack of career pathway for teaching-only staff, such positions will be confined to the lowest academic ranks (Level A and Level B). In 2011, CQU offered its academic staff the possibility to transfer to 'teaching scholar' (teaching-only) positions, and nearly one-third accepted the offer within 5 weeks (Hare 2011). According to Scott Bowman (CQU Vice Chancellor), teaching scholars can be promoted to full professorship (Rowbotham 2012), though in practice the current CQU promotion criteria for teaching scholars include demonstrated research publishing for promotion to associate professor (Level D) and above.

Although these approaches are improvements over the ad hoc use of casual teachers, shifting academics from combined positions into teaching-focused positions will probably have detrimental effects on job satisfaction for those holding a stronger interest in research. The lack of available research time for academics in teaching-focused positions is related to the self-reported satisfaction for Australian academics. Bentley and colleagues (2013) found that academics who declare an interest in research but fail to have adequate research time are less likely to be satisfied overall and across a range of job-related measures.

In view of the above, there seems little doubt that the further diversification of academic career pathways will remain high on the agenda for the coming years. With further expansion of the system in terms of number of students enrolled, and budgets remaining tight from an institutional perspective, issues of efficiency and productivity will be core to institutional change strategies. There is very little doubt that this will profoundly impact on the conceptualisations of academic careers by both national and institutional policy makers and by individual academics.

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