Tensions in the provision of higher education and training in psychology

A case study into their exposure by COVID-19

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We discuss developments in higher education in Australia through the lens of the impact of the COVID-19 pandemic upon the provision of education and training in the discipline of psychology. Since its inception in universities after World War II, psychology educators in Australia have continually dealt with different, often conflicting, goals and with different methods and institutions in the regulation, accreditation, and process of the education of psychologists. These include the goals of training in practice, training in science, the administration of organisations and the concepts of profit and 'value' pulling teachers and students in different directions, and in the employment of graduates in multiple roles with different expectations held by the public and government. The impact of COVID-19 since 2020, rapid developments in technology, and the likely continuing changes in the sector that ensue, can be viewed as sources of magnification of the difficulties. Implications are drawn from the case study of psychology in Australia to highlight similarities and differences with psychological education in other countries and serve to illuminate possible futures for higher education in Australia and abroad.

Keywords: higher education, training, psychology, scientist-practitioner, COVID-19

Introduction

We discuss the impact of changes in the tertiary education sector in Australia that have resulted from the COVID-19 viral infection of 2020, continuing into 2021 and beyond, through an analysis of the discipline of psychology and the alignment of forces which impact upon it. The discipline of psychology is taken as a case study of the various impacts. The nature of the discipline, incorporating elements of scientific training, professional training and the suitability of graduates for employment in broad sectors of the community, beyond the professional practice of psychology, render it vulnerable to political, economic and institutional change.

We emphasise the impact of these forces upon the process of training to be a professional psychologist, but we acknowledge that the impact on the educational process in psychology as a 'liberal arts' subject could be less severe. However, we argue that the changes in the training of professional psychologists has had an impact upon the essential elements at the undergraduate level and so there are ramifications for how a 'liberal arts' education itself becomes more 'professionally' oriented.

The success of the profession of psychology in Australia is epitomised by the existence of over 42,000 registered psychologists (Psychology Board of Australia, 2021) who work in the public and private spheres, encompassing many jobs in the health sector, but also in commerce, business, the military, education and in research and development. Success is also signalled by the huge number of student enrolments in public and private tertiary institutions, making the discipline one of the most popular subjects to be studied across the continent.

An important feature of psychology for the present discussion is that the term 'Psychologist' is a legally protected term. It cannot be used by a person to describe their job unless they have been legally registered with the Australian Health Practitioner Regulation Agency (AHPRA) after completing a fully accredited program of study, which itself must be approved by the Australian Psychology Accreditation Council (APAC). This means that the number of people who are employed as 'psychologists' does not reflect the number who have completed a lengthy period of study in the discipline, but who have been unable to go on to the further study necessary to be registered. Many students are enrolled in a three-year undergraduate degree but are unable to progress to a fourth and subsequent years of study. They are later employed across many facets in the community, using their psychological skills, but cannot be labelled as a 'psychologist'. The number of people in society who have benefitted from psychological education is thus severely underestimated by the number who are registered. Our analysis therefore goes beyond the boundaries of the registered profession and into general employment within society and examines the management of education of psychologists and related occupations in the tertiary sector. As we have noted above, the impact of changes in the program to train professional psychologists, focussed upon the education of clinical psychologists, affects all of psychological training and affects how psychologists or people with a background in psychology think about issues and problems.

The overt success of registered psychologists is one face of the development of psychology. Other covert faces, less visible to the public gaze, depict tensions and conflicts between practitioners and scientists, employers and graduates, educators and students, and health practitioners and workers in commerce. The structure of the educational system that currently prepares psychologists for employment, and which underlies the production of partly trained psychologists who migrate into other areas of employment, generates these tensions and thus needs analysis.

In this paper we take the example of the teaching of psychology at tertiary level as a case study of change in the provision of higher education in Australia. We view the tensions and difficulties that arise as a lens through which we can view other sectors of education and employment. We use psychology as a case study in the sense proposed by Campbell (1975). Psychology itself encapsulates relevant variables in a form which can be tested and compared with other events in the same domain, namely the role of universities in the education and training of graduates in many sectors of employment. The success of psychology, taught in every Australian university, and in colleges in the private sector, with strong employment opportunities, provides a model for other disciplines. It is also taught in countless other countries, which allows global comparison. Furthermore, it is a fundamental discipline, with elements of science and mathematics in the curriculum, and it also prepares students for a professional career. Finally, it is embedded in many facets of the tertiary sector, in faculties of science, arts, medicine and in some form in faculties of business and commerce. The study and practice of psychology permeates all sectors of contemporary society.

Psychological education: the university based years

The discipline of psychology has a long history in the university system in Australia. A three-year course in the discipline had been established at the University of Sydney by 1925 and the end of World War II saw the establishment of a department of psychology in most universities (Cooke, 2000). The history of education in psychology in Australia has been marked by changes from the self-accreditation of courses to accreditation by the professional society, the Australian Psychological Society (APS) and State based health

and education departments, through to the establishment of APAC at the turn of the century (Cooke, 2000; Innes & Morrison, 2020).

The role of the registration of psychologists to allow them to practise in the community, initiated by the States and incorporated into Federal law, must also be considered in order to understand how and why psychologists are taught as they are. We can map the changes in the form and the incursion of accreditation from the early stage, where accreditation by an external body could be regarded as an invasion of university freedom of study (c. f. Cooke 2000) to today where the external accreditation processes are essentially governed by the profession and not the training institutions.

There are two primary faces of psychology, which have been accommodated in the structure of departments and in the curriculum. The first is the scientific: psychology as a discipline with an education in the scientific method, statistical analysis and an emphasis on theory testing. This has arisen from the concept of psychology as a basic science and stems from the self-conscious need by the discipline to differentiate itself from the discipline of philosophy in which its subject matter, the examination of the causes and the nature of human experience, consciousness and behaviour had originally resided. The second is the practitioner face where the intention of training was to deal with the burden of mental illness and also with practical interventions in matters of personnel, organisational efficiency and aptitude testing in schools and vocational institutes. Psychology was conceived to help the human condition in all of its forms. It has especial relevance to those who suffer from debilitating mental conditions and was therefore conceived as a form of medical practice. This is a face which especially attracts public and public policy attention. But there are many other facets of psychology that impact upon the public and the workforce which are concerned with mental health and workplace efficiency.

However, all of these facets have a basis in the scientific discipline. The adoption of the Scientist-Practitioner Model (SPM) (for a detailed review of the model's foundations and assumptions, see Jones & Mehr, 2007), with the omnipresence of science as the foundation upon which to build a set of practical skills, however those skills may be employed, was viewed as essential to the process of the accreditation of courses in universities and to valid practice in the community. The original process of accreditation of departments was premised upon the need to recognise graduates of psychology as providing solutions and advice based upon scientific inquiry and not upon religious, spiritual, or private experiential processes (*c.f.* Cooke, 2000).

The fundamental nature of SPM created an essential tension at the heart of the departments of psychology. The requirement to provide training in science meant that students were first exposed to courses in statistics, experimental methodology and in psychological measurement and theory. This took up a great amount of time and displaced the time that could be spent initially upon the practice of psychology. The latter required training in close interpersonal interaction, in the ability to understand behaviour based upon the observation of subtle aspects of human behaviour, to ask questions and deal with the subtleties of interviews and the drawing of inferences of psychological states from the actions of clients. These skills also require extensive time and, in many cases, one-to-one tuition to inculcate and evaluate the skill level of the student. But in the initial training of the novice psychologist this latter set of skills was considered to be the necessary second step to and dependent upon the initial science-based training.

This tension existed within a context of the differentiation of disciplines within the university sector more generally. Staff within universities globally will recognise a feature of university life that exacerbates differences in cultures, namely the hegemony of research as the criterion for judgment of excellence as against the ability to teach. Research performance is regarded as the principal basis for promotion (Zimmerman, 2020) as opposed to conducting applied research, consulting clients, and generally dealing with problems in the world, rather than in the laboratory, to provide the development of skills and knowledge to transmit to students. These activities almost inevitably result in fewer opportunities to conduct research and create greater delays and problems in getting things done to persuade editors that the research was valid and important. Hence, there was a further validation, in the eyes of many in the universities, that the research culture was the important one and, in the case of psychology, the scientific route was even more so.

There were, in effect, two cultures in existence within a department of psychology. The first, given priority as the foundation of scientific knowledge, was the establishment of a culture of research, based upon the induction of a tacit knowledge of how to practice research and validate psychological knowledge. Such tacit knowledge could not be attained solely through reading texts and carrying out statistical analyses. It depended upon the socialisation of students into the practice of research under the supervision of staff who themselves had undergone a process of scientific socialisation. The process of acquiring tacit knowledge was seen as the fundamental element of understanding and applying the scientific method (Collins, 2019; Strevens, 2020). The process of socialisation was achieved through attendance at laboratory classes where experiments in sensation (especially in the minutiae of procedures in psychophysical methods), perception, learning, memory and cognitive problem solving were carried out by individuals and groups under close supervision. The ubiquitous requirement

of the final year research thesis was the symbolic culmination of this belief system. The one-on-one supervision adopted for the development of the final year thesis reflected this socialisation, without it necessarily being articulated. The dominant research culture was implicitly communicated to staff and, importantly, to students. And this took up a great deal of time.

The second culture, equally dependent upon other forms of tacit knowledge, was the transmission of knowledge of how to interact with other people. These 'others' were people who could be experiencing realities and insights different from those experienced by the people, the psychologists, who were trained to help. This sphere of tacit knowledge required skills that were similar in some ways to those in the sphere of scientific discourse described above, in that they were concerned with problem solving, were implicit and learned through socialisation and immersed experience, but they were separate in space and not shared across all members, who tended to be in one or other of the spheres and not in both.

The separation of the cultures was exacerbated by the adoption of a model of training in the discipline whereby the initial years of training in the science of psychology was conducted in the undergraduate degree and training in the professionally oriented practical skills for later practice and the legal requirements of registration was conducted in postgraduate degrees. It is vital to understand this distinction as it led later to problems in the calculation of fees charged for progression to a professional degree, as we shall examine in this paper.

The implicit dominant importance of efficacy in science meant that within the accreditation standards there was an emphasis on the establishment of a culture of scientific involvement of staff. This was especially so in the years after WWII where the science of psychology was prominent and the practice of psychology less so. Time was given to staff to conduct psychological research and to publish in reputable journals. Without such evidence, accreditation of a department or a new course was not possible. The provision of professional practical training was, in the universities, facilitated by the later creation of clinics whereby students could meet and treat clients in controlled conditions, under the supervision of staff who were also allowed time away from university teaching and supervision to conduct private practical clinical consultations with clients.

An important aspect of the early emphasis on 'science' was that the science was largely regarded as based upon the hegemony of the experiment as the method of choice and the dominant role of theory as a guide to the development of hypotheses and research questions to be posed. Only in recent years have there been developments in qualitative research methods, an emphasis upon experiential learning and exploration and the role of observation and examples as a legitimate method for the conduct of the science of psychology (Billig, 2020). It is within living memory that the use of qualitative methods in a research paper would lead to rejection by an ethics committee on the grounds that the methodology was not 'scientific' and hence not ethical! The endorsement of qualitative methods, with an attendant emphasis on observation and interpretative analysis, skills shared with the tacit skills of professional experience, could have eroded the barriers between the cultures.

Therefore, there was a division between 'scientific' staff, training undergraduate and honours students, and 'professional' staff, training postgraduates. The professional oriented staff would frequently not be exposed at all to undergraduate students who would only get personal experience of such professionals in their final year when the staff would talk about the opportunities available for postgraduate study.

There were consequential financial effects. The conduct of science and research in the training of undergraduate students, where there were large numbers of enrolments, subsidised the practical training of students at the postgraduate level where the intensive style of training resulted in relatively small numbers of students. These requirements were ingrained in the accreditation standards over the years and the evolution of such cultures and the embodiment of them structurally in the developments of offices and laboratories and meeting places, which created barriers to communication between members of the same school or department has been portrayed in Campbell (1969).

The cultures that co-existed affected the actions and belief systems of staff members. There was also a 'trickle down' effect upon the students. The bulk of students in departments of psychology, especially towards the end of the 20th century and into the present, were interested in becoming psychological practitioners and not psychological scientists, as evidenced in the eventual employment of graduates in professional rather than scientific roles (Kennedy & Innes, 2005). The majority of students did not expect to spend the undergraduate years learning to be scientists. They wanted to attain practical skills to help people. They saw little point in the courses in statistics and in the concentration on the minutiae of experimental design while not being given the opportunity to meet 'real' people and learn the practical skills of the delivery of interventions. But the dominant message derived from the curriculum and its exegesis was that science was prior to practice and hence more important in the process of education.

The students in the main were ignorant of the degree to which the teaching of psychology in the universities was governed by the accreditation process where the emphasis was upon science rather than practice. Students reacted against

the curriculum, which was seen as under the control of the staff rather than external bodies. A collision of cultures existed from the first year of study. The tension was always present. The popularity of psychology as a university subject also played crucial roles.

First, there were many students filling places in the undergraduate degrees, and they were financially important for the departments and also for the universities within which they resided. Psychology enrolments enabled the subsidisation of many departments in other disciplines that had lower appeal, especially if the psychology department was based in a faculty of humanities or social sciences where a direct subsidy was easily arranged. Many heads of departments were required by vice-chancellors to exceed the quotas for psychology places to make up shortfalls in enrolments elsewhere. Second, the large enrolments in undergraduate classes put a strain on the ability to provide the required high staff/student ratios, which enabled the training of tacit skills required to complete scientific experiments and surveys. Training in practical classes declined or was replaced by provision of classes dependent on computer simulation of laboratory exercises. Students therefore did not become aware of a fundamental rule of science, namely that many experiments fail. Their exposure was to simulations that worked or tasks that were designed to be fail-safe. The training in how to do 'real' science under trying conditions was eroded. Training to deal with people, also extremely difficult with high failure rates was, however, conducted at postgraduate level with more staff and fewer students, so there was a greater 'built in' support system to help students acquire those difficult skills.

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There were further unintended consequences of the training system. The pathway to a research career, via completion of a PhD, was through the completion of an honours degree, with a research thesis. However, as training opportunities emerged in professional ranks, with postgraduate coursework a requirement, the need for selection of good students into these led to the talented students, who wished to go into the profession, choosing to do the honours route. This enabled them to get a better degree and this then enabled the selection of students for professions to be based upon completion of a research degree! So, there was a further clash of cultures: students seeking to be professionals had to complete a research degree to compete for entry. The rite of passage to professional training, ironically, was through the training to be a scientist.

Another feature of the production of practical psychologists in Australia set it apart from other systems in other countries. While a pathway to registration and practice was through completion of a four-year degree and further two years of training at postgraduate level, many psychologists could proceed to registration through the so-called four-plus-two pathway. This involved the student completing a four-year undergraduate program, although the fourth year did not need to be a full-blown honours year with an individually supervised research thesis. The first three years were the standard training in scientific psychology, but the fourth year might involve completion of a thesis (again required because of the 'science' of psychology) but carried out in a group of students focussed on a project under the supervision of a staff member. The course work at fourth year level might also provide some additional 'practically oriented' skills. Upon graduation these students could then commence two years of supervised practice outside of the universities, supervised by a registered psychologist. For this cohort of students, the three years of undergraduate 'science' was increasingly seen by these students as a distraction from the goal of becoming a registered health professional and the fourth year of study in a group was seen by many as a second-class education to produce second-class professionals. The four-plus-two pathway can no longer be commenced by undergraduate students, but there are still students in the system who are completing such a pathway and there are large numbers of registered professionals who have been trained by this means.

The process of change within the profession, the accreditation body and the universities was slow and the differences between the various standards accreditation documents were relatively minor, until recently (APAC, 2019). The tensions within the profession between the 'four-plus-two' trained practitioners and those who had attained master's qualifications were strong, and represented a further collision of cultures, this time within the practice of psychology. These tensions were further exacerbated by the introduction of a payment for psychological services through Medicare in 2010, which provided two tiers of rebates to clients, a higher one for professionals with endorsed areas of special practice (mainly trained in coursework postgraduate units in clinical psychology) and those with 'general' registration, mainly with four-plus-two training. The latter group, comprising fully two-thirds of registered psychologists, believed that their services were essentially the same as those provided by the former group but attracted lower remuneration. This perception only further fomented the tension. These tensions persist to the present day. The establishment of professional organisations

separate from the original APS, for example, the Australian Association of Psychologists Inc. (AAPi) demonstrates the concerns that many registered psychologists have that the APS does not properly represent their interests and they continue to lobby government for changes in the fee structure for psychological services (Carrison, 2021).

The Popularity of Psychology

These tensions within the discipline were enhanced by the immense popularity of psychology as a subject of study. For several decades psychology as a subject has been among the most popular with students. Enrolments in the first-year course are approaching 3000 students in several universities in 2021, and these numbers, while declining over the course of the three-year undergraduate degree, remained exceptionally high. Indeed, psychology contributes greatly to the prominence of 'Society and Culture' as the most popular broad field of education among commencing bachelor's degree students (Department of Education, Skills, and Employment, 2019).

Many students took the initial unit as an interesting elective, but a highly significant number were intending to continue study with the intention of becoming a psychologist. These hopes and intentions were dashed for many as the numbers which could be accommodated in the fourth year, whether with a single student or group-oriented research thesis, could never satisfy the demand. This meant that at the end of the third year many students had to graduate with a three-year qualification and be ineligible to register. The responses to the Student Experience Survey in many universities were testament to the disappointment of many students with the failed promise of a career in psychology. The items assessing 'Learner engagement', for example, are characteristically at the level of 50 per cent for psychology students, well below the average for all graduates.

The lack of practical training in the undergraduate course meant that these students graduated with few employable skills. Teachers of psychology appreciated the fact that the majority of graduates from three-year programs did not progress into fourth year (Kennedy & Innes, 2005) and therefore there was a perceived need to provide them with a pathway to employment outside the discipline. The evolution of the graduate attributes of an Australian undergraduate psychology program (Cranney *et al.*, 2009; Provost *et al.*, 2010) and how these could be related specifically to components within the degree courses was an attempt to signify to students and potential employers the skills and insights embedded in a psychology undergraduate degree. This movement was followed by one which emphasised the importance for any graduate of having 'psychological literacy' (e.g., Halpern, 2010). With an undergraduate education in psychology, equipped with critical thinking and problem-solving skills, cultural competencies and an understanding of scientific research practices, the graduate was conceived of as better equipped to become a citizen and a constructive member of society. While some aspects of an education in psychology can be seen in the general light of a broad education, the actual failure to proceed to a career in psychology could not be easily compensated for. And the degree to which such 'literacy' acquired from psychology is in any way different from or superior to an education in a plethora of other disciplines was not made clear. The emphasis upon science at the undergraduate level, while appropriate in the early years of the establishment of psychology in the tertiary curriculum, results in low levels of 'employable skills' for the three-year graduate, at a time when the emphasis of university training has changed to one of preparation for employment.

Recent changes in the construction of the curriculum and its relationship to employability have occurred. But it is first necessary to address another significant structural change that occurred within the tertiary education sector, one which could be viewed metaphorically as a new world or culture entering the system on a collision course.

The development of private tertiary education

The beginning of the 21st century saw the emergence of a new force in tertiary education in Australia, namely the provision of education by private providers. While initially there was an emphasis upon education in business related courses, inevitably there was pressure to provide education in courses that, while still practically and vocationally oriented, were reliant on the so-called 'soft skills' in interpersonal relationships and the ability to deal with people.

In portraying the differences between private and public delivery of psychology and commenting on the effects of these changes on the general sector, we can take a case study of the accreditation of a program in psychology through one higher education provider (HEP). In 2010 the Australian Psychology Accreditation Council (APAC) gave conditional accreditation to a suite of programs in psychology to be taught from 2011 in a long standing private HEP, which had not previously offered psychology in an accredited form. This changed the practice that had enabled only universities to provide courses in the discipline (Innes, Harris & Little, 2014). The HEP also was required, as with all higher education institutions, to be accredited by the Tertiary Education Quality Standards Agency (TEQSA). The provider later moved to become a Self-Accrediting Authority (SAA) within TEQSA enabling it to change units and courses without having to apply to TEQSA at every stage.

The Courses

We refer hereafter to courses as a term for structured collections of units of study. Use of the term varies across the sector and may be referred to as 'programs of study'. The courses which were the subject of the accreditation application complied in all respects with the requirements set out by APAC. They mirrored in substance and method of delivery every equivalent accredited program of psychology taught in Australia and were extensively benchmarked against Australian university programs. One could read the course descriptions of the units and be unable to differentiate them from any unit delivered in one of the countries 'sandstone' universities.

While the APAC accreditation process guaranteed recognition of the new accredited course by all other accredited programs, all of which were in public universities, this recognition did not eventuate immediately. Several universities for years afterwards specifically mentioned in their advertisements on their websites that students with degrees from this institution were not eligible to apply for places in their courses. And the general opprobrium of private HEP programs was summarised by the comments of one vice-chancellor of an Australian university that they were akin to 'Ma and Pa Kettle delivering courses out of the back of a ute'. For younger readers, Ma and Pa Kettle were caricatures, played by Marjorie Main and Percy Kilbride, of 'simple country folk' living in rural America in the 1940s, and portrayed in a series of films from Universal Studios in the 1940s and 50s. They were somewhat akin to those described by the disparaging term the 'deplorables', referred to in the American Presidential election of 2016; they were conceived as people who would have nothing that would be of value to a university educated person. The irony of the comparison is that the morality and common sense manifested in the actions and words of the Kettle family were portrayed in the films as fundamentally superior to those of the 'sophisticated' city folk who looked down on them. The Kettles were tacitly more worldly and 'street smart'.

An important difference was, however, that while the content of the psychology units within the bachelor's program complied with APAC requirements, the HEPs program was differentiated from other programs taught in universities by the content of the non-psychology electives, which were a required part of the degree. The main course provision in the institution was the delivery of programs in counselling. This provided a range of units in counselling theory and method. The major benefit of the inclusion of this range of electives was that students were provided, within their first and second years of study, with units which required the acquisition of practical counselling skills. These were taught and assessed by experienced practising counselling staff and included the acquisition of practical skills assessed by observation and the grading of videotaped role plays. Therefore, while the three-year program in the content of psychology adhered to the requirement that the basis of the course be in the science and not the practice of psychology, the non-psychology electives helped to equip students with fundamental skills required for delivering psychological services. The private provider was able, early in the undergraduate course, to provide training in both the scientist and the practitioner modes required of the psychologist. They were taught within an ethic and philosophy of experiential learning (Bennett-Levy, 2006), transformative education (Hoshman, 2004) and the development of the ethical, self-aware practitioner. This had the benefit of a dual training regime early in the development of the student. It also maintained the motivation of the students to understand the application of what they are learning during the early years of the course and less dissatisfaction with the science component.

The success of the suite of courses resulted in increasing applications to enrol, which led in turn to increasing enrolments. The behaviour of the universities, increasing psychology undergraduate places because of popularity, and thereby decreasing the quality of the educational experience for the student, was copied in the private sector, albeit to a smaller degree in terms of numbers. But the effect was the same. Larger and larger proportions of the enrolled students were unable to progress to entry into the essential fourth, fifth and sixth years of study in psychology. There was an alignment of the paths of the private with the public institutions in how the students were treated.

A fundamental collision of cultures: financial profit

A key feature of the rise of private provision of tertiary education was, of course, the profit which could be made by the providers. It is a truism that all education comes at a cost; the value of primary and secondary education is seen to benefit the social capital of the community and therefore large investments are made by government to underwrite that provision. Tertiary education in the latter part of the 20th century was not seen in that category and the student, the 'consumer' who was seen as being the beneficiary of the tertiary experience, was seen as the person who should pay for that experience. In Australia the problem of how to charge fees was solved by the creation of the Higher Education Contribution Scheme (HECS) whereby students could avail themselves of a low interest loan from the government while engaged in the education and pay off the loan after graduation upon attaining a set level of income. The part played by private providers was facilitated by the development of a similar scheme, FEE-HELP for those enrolling in a private HEP, although there were, and

continue to be, significant differences between the public and private scheme, which involved an up-front fee within the private that was not charged in the public scheme.

For staff in a university the fact that the university, in order to exist, had to provide an operating surplus ('profit') in order to continue, was seen as secondary to the social 'value' that the universities provided through the training and later employment of graduates. The staff in a private HEP, on the other hand, were faced with the clear message that the provider had to provide a profit to the owners and shareholders of the companies. There is, within a capitalist society, nothing wrong with the concept of making a profit. However, within the HEP organisations, a loss could lead to the failure of the company. In the universities, there was a perception that a loss and subsequent failure would be unacceptable to government and so some cushion would be provided. The private HEP had to make a profit to survive, at least in the medium if not in the short term, and therefore costs had to be strictly curtailed. This meant in practice, that fees would rise, failures of students to complete would be minimised and that staff would provide as many teaching hours as possible.

This last requirement, especially in the case of psychology, meant the culture of a research culture in the accreditation standards collided with the profit motive of the owner. In our case study, the HEP did provide a culture of research. There was funding for conference attendance and travel and small research grants to start projects. But no private HEP had access to any of the government research schemes. And teaching, including assessment, was a significant component in the calculation of workloads. So, from the very beginning, there was a seed of a perturbation in the system in a department of psychology required for the successful workings of an accredited set of courses.

The accreditation of the existence of a research culture could also be raised as a matter of contention. The private HEP adopted the broad based 'Boyer model' of research and scholarship (Boyer, 1996), which defined four types of scholarship, namely, the scholarship of basic research, the scholarship of integration, the scholarship of application or engagement and the scholarship of teaching and learning. While these four types are legitimate and the development and support of them is praiseworthy, psychological research was seen by the psychological staff as being in the first category and not in the organisation, systematisation and promulgation of previous knowledge. The training of psychological scientists was premised upon the socialisation and immersion of students to be able to conduct experiments and surveys with tacit knowledge of the subtleties of how to conduct science and not merely what Collins (2019) would term 'interactional tacit knowledge', whereby they could talk about 'science' with proficiency in the jargon but not in the practical skills of 'doing'.

A further systemic transformation

Change occurred however, due to stresses in the tertiary sector generally. While the accreditation Standards of APAC had previously been highly prescriptive, the development of the Standards, commencing in 2015, resulted in a significantly changed approach and documentation.

The standards moved from an emphasis on the inputs into a degree, to an emphasis on outcomes and these outcomes were focussed more on the preparation of students for professional registration. Hence there was a significant movement in the cultures which received emphasis from the 'science' focus to the 'practice' focus. The Standards (APAC, 2019) emphasised five domains. The primary domain was Public safety, the second Academic governance and the third was the Program of study, in which there is a mention of science as the basis of training. The fourth and fifth domains are 'Student experience' and 'Assessment'.

Within these domains a key change was to one which gave 'education providers greater freedom in how they structure and run their programs and greater flexibility in demonstrating how those programs meet the Standards' (Crowe & Carpenter, 2018). The documentation lacked lists of 'required evidence' or 'prescribed approaches' and allowed the institutions freedom to demonstrate how their individual programs reasonably met the Standards.

These changes followed upon discussion in the profession about the role of 'competencies' arising from educational experiences (and not attributes). The listing of competencies and the embedding of these within the curriculum developed in psychology as elsewhere in the allied health professions. psychology moved significantly from having its place in the sciences, arts and philosophy to a firm position in the health sciences (Pachana *et al*. 2012).

One of the significant outcomes which could result from these more flexible Standards was that schools and departments could dispense with lectures and examinations. These features which had been significant in the case of the accreditation of the private provider to join the list of accredited institutions simply disappeared, provided that the institution could demonstrate 'how the program reasonably met the Standard'. The public institutions now appeared more like the erstwhile private ones.

There has been a marked change in the nature of the fourth year of study within a psychology curriculum. Where once the fourth year was seen as an opportunity to learn science-research based skills through the completion of a research thesis under skilled one-on-one supervision along with additional training in methods and data analysis, the fourth year is now a version of a pre-professional year, establishing one-on-one interpersonal skills, interviewing and assessment (APAC, 2019). While this can be seen as a positive development it

does also signal the retirement of a research-based education within a psychology program, which may be mirrored in the future in cognate departments such as cognitive or computing science, or artificial intelligence systems. Preparation in the areas of cognitive, social and developmental psychology will not be available.

Other changes also emerged generally in the sector, which profoundly affected tertiary education. The emergence of teaching-only positions, breaking what was seen as the essential nexus within the university between teaching and research, eliminated the need to demonstrate a 'research culture' within a school. As long as there were some members of a department who had a research profile (and perhaps could be employed in 'research only' positions) then the integrity of the SPM could be maintained. Cultures within departments could be aligned by the elimination of a significant presence (namely research) within a culture. The proportion of academics who are in teaching-only roles is presently relatively small compared to those who have a research element in their roles (at least before the effects of COVID-19 were felt). It is likely, however, that departments will be able to maintain their research culture by having higher numbers of staff not teaching. However, another factor within the new Accreditation standards emerges which can further bring about an alignment of systems.

Final perturbations in the system

Two events or processes emerged in the 21st century which introduced major turbulence into the system. While both were extraneous to the process of education, they were initially unrelated but very quickly coalesced to provide major shocks.

The Impact of Technology

The first was the burgeoning technology associated with automation and the development of artificial intelligence (AI). While such developments had long been having significant impact upon the world of work and employment, the changes in the education environment were essentially small (Galloway, 2020) and in psychology in particular the threat of machines affecting the behaviour of psychologists was seen as essentially zero (Frey & Osborne, 2013), although this sanguine view was not shared by all (Susskind & Susskind, 2015). More recent changes in the development of AI have, however, changed that perception and there are now fears that machines will play a large role in the disruption of the practice of psychology and in the displacement of employed psychologists (Innes & Morrison, 2017; 2020; 2021). Psychology as a profession and as a training discipline will, on these predictions, have to make significant changes in the business model of training and in the business of delivering service.

The developments of technology are having major effects upon the methods of delivery of education. Online delivery, changes in methods of assessment and the demise of the traditional lecture are all emerging as forces in the education system. These developments were occurring, although at a slow pace in the beginning of the century (Galloway, 2020). But the other external force in 2020 had the impact that formed a coalition of forces that remain virtually unstoppable. The pandemic which resulted in the massive and rapid change in the tertiary sector to the provision of recorded lectures and online tutorials and the perception that even when the pandemic recedes there will be a permanent adoption of a hybrid model of delivery of education has changed the nature of education. This impact has been referred to as the universities' 'Kodak moment', likening the failure to adopt electronic online technology in teaching to the failure of Kodak to adopt digital cameras. This comparison can be attributed to Professor Steven Schwartz, then Vice-Chancellor of Macquarie University. The relative advantage that the private provider had in the delivery of such a hybrid model was eroded significantly by the impact of COVID-19.

Online delivery, changes in methods of assessment and the demise of the traditional lecture are all emerging as forces in the education system.

But the emergence of COVID-19 also had the effect of producing a major perturbation in the delicate balanced system of an education in psychology, mediated by the injection of governmental processes into the system. The effect in psychology may be greater than in many other disciplines because of the way that training in the basic discipline and in the practical skills was separated for a long time into undergraduate and postgraduate streams.

COVID-19 exacerbated the perception that the tertiary sector had to provide what are seen as employable graduates. As part of governmental intervention to educate students to make them more 'employable' in a post pandemic world, the Liberal-National coalition in 2020 proposed a revision of the fee structure of degree courses, emphasising training in STEM subjects and directing students away from the study of the humanities and the social sciences, by reducing the fees in the former and increasing them, massively, in the latter. Within this, there was a proposal to facilitate the production of allied health graduates, including a reduction in the fees of students doing postgraduate courses in psychology. But the pathway to postgraduate training in psychology was entirely dependent upon completion of an undergraduate degree in which the

essential feature was the intrinsic nexus of science and practice and was embedded in the distinction between them. The result was that a graduate in psychology, who planned eventually to exit the process as a health practitioner, would end up paying more! The Minister and advisors seemed not to be aware of the problem. Subsequent discussions resulted in amendments being made. It should be noted that these changes seem to have received support from the parliamentary Senate for an initial period of two years.

A proposed solution to the anomaly was that some units in undergraduate programs in psychology could be labelled as 'Pre-Professional Pathways' and therefore be charged lower fees than arts and social science courses with essentially the same content. This created a contrast with combinations of courses in the discipline being charged fees at lower levels than the same courses in another degree combination. A lower fee would be charged for psychology units which were pre-registration relevant. A higher fee would be charged for units which were not part of the essential accredited program. This may have the result that more of the accredited program will be devoted to psychology units, including pre-registration practical courses, and less to the study of units in culture, sociology, anthropology and the arts which have previously been thought by many (within psychology and beyond that, in the community) to be essential for the general acculturation and social insight necessary for a successful psychologist to operate. Many practitioners in the professional branches do not hold such a view. Professional psychologists are renowned for their statements bemoaning the time spent on the irrelevance of statistics and methodology course in their training. The students have almost forever been critics of the emphasis upon 'science' A new generation of student, the ones who have to pay the fees may well believe that their money should be spent on the directly practical units and not on the 'softer' (and more expensive) material, which is contained in the social science and humanities units. Universities and departments may have problems in persuading the consumer (the student) that they know better how to spend their money.

At the same time as these events took place, there were appeals made by the APS and by Heads of Department and Schools of Psychology Australia (HODSPA) to political parties for help and there were moves by members of the National Party to assist. Such intervention may be seen by some as beneficial, with the proposal that some fees be reduced, but there are possible unintended consequences that will emerge in years to come. Members of the parliament will come to examine in more detail the content and methodology of the curricula that they have been invited to support. It would take little effort for an inquisitive MP to ask why the undergraduate curriculum of a trainee psychologist requires the inclusion of non-psychological content, in the form of electives in anthropology or history or economics, or why there is no emphasis in the early years of hard practical training in 'hands-on' skills. While the most recent (2019) APAC Standards have moved measurably towards the inclusion of such skills, they are still some way away from centrality in the process. So, the profession of psychology is at risk of having political questions being asked about what is done at the training level. There are certainly people within the profession and within the universities who ask these same questions and who may ally themselves with the political stakeholders, who, importantly, remain the purse holders.

It needs to be noted that the perturbations in the higher education system which have been created by the COVID-19 pandemic and the economic reactions to that by government have further elevated the tensions between the sector, especially the university sector, and government, which have been in existence for many years. There tensions are examined in depth by, among others, Megalogenis (2021) and they promise to continue for some time. Psychology as a discipline and profession is caught in a particular cycle of these changes.

The acceptance of government of the necessity of mental health interventions in the pandemic has resulted in much support for the health sector and the support of such changes as tele-health, which has been extended to psychologists. At the same time the conflicts within the profession over the training of psychologists and the payment of Medicare benefits, and the two-tier system in those payments, have been a source of annoyance for the government in dealing with disparate sections of the profession. The overall training of psychologists within the university sector, as set out above, has only added further to the exasperation of government with the profession. The significant downturn in funding for universities within recent budgets, set out in Megalogenis's article, has resulted in attrition of university staff which has been extended to psychology departments. Reductions in the proportion of the education budget allocated to higher education from 41 per cent in 1995 to 23.5 per cent in 2021 has only exacerbated the stress within psychology. In addition, the changes in demands for postgraduate training in specialties within the profession, created by the Medicare payments being made to clinical psychology practitioners, has resulted in significant reductions in applications for and enrolments in specialties other than clinical, such as organisational and development psychology. The universities have cut staff in these latter specialties, which has resulted in further disruption and imbalance of the fundamental disciplines within psychology, with consequences for the future direction of the discipline.

The impact of the COVID-19 pandemic continues, with ramifications beyond the ability of the health sector to cope with the infection. The incidence of mental illness, anxiety, depression and suicidal ideation has been emphasised, of course, and psychology plays a significant role in combatting

these outcomes. Notably, Davey (2021) cites recent evidence for the increasing distress in the community stemming directly from the effects of COVID-19 ('Lifeline records highest daily calls on record as lockdown exacerbates loneliness, hardship' (Davey, 2021)). Relatedly, the introduction of telehealth and smartphone apps are outcomes that have an impact on the delivery of psychological interventions and the general appraisal of technology will affect training of psychologists (Innes & Morrison, 2017; Innes & Morrison, 2021; Susskind & Susskind, 2015). But the impact of lockdowns on attendance at school, with impact not only upon learning and skill development, but also upon emotional and social development of children which follow from peer interaction, participation in sport and general fitness are in the province of psychologists training in educational and development psychology more so than in clinical psychology. The effects of the pandemic upon work practices, working from home and participating in distributed teams and virtual meetings, and increased automation lie in the province of organisational psychologists trained to assess productivity, efficiency, the effects of social interaction in groups, the influence of organisational culture, mediation and monitoring of workplace behaviour, and much more.

These latter professional psychological skills have traditionally been acquired at postgraduate level in universities. With the surge in enrolment applications for places in clinical psychology, however, many universities have shifted places from these programs to places in clinical psychology, resulting in the closure of programs, the severance of staff and the inability to respond to changing demands in the nature of the psychological workforce. The pandemic has affected the ways in which psychologists are needed. The universities have responded to the enrolment desires of students and are now in a changed environment with a need to pivot resources.

Conclusion

An education in psychology in Australia has always been an exercise in balancing conflicting forces, whether they be the balance between science and practice, teaching and research, or the balance between emphasis upon the undergraduate or postgraduate years of study. The impact of private education and then later forces of technological change added to the stress and the strain within the system. The present circumstances in which psychology is seen as a desirable and necessary bastion in the battle against mental illness, stress and change which can be supported by government in training and in practice in the fight, demonstrates the nature of the balance and how delicate it can be and how it can be perturbed. The emphasis placed upon the universities by community and governmental expectations for 'employment-ready' graduates has added further tension in the system and the particular tension within psychology between the relative emphasis on science in the early years and employability in the latter years, has produced a particularly virulent form of strain. The tensions that created the discipline of psychology are in a new balance. The pandemic has only added a new stress with consequences for employment and mental health which follow and create additional governmental interest, which especially resonate with issues within the discipline and profession of psychology. But the history of the discipline shows that that balance has always been delicate. Where the next perturbation will come from and what effect it might have on the employability of psychologists and the employability of those who train and teach them remains to be seen. The nature of the degrees of psychology will almost certainly change significantly very soon.

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