

Creative Doctorates, Creative Education? Aligning Universities with the Creative Economy

ABSTRACT

During the 1980s and 1990s, the university was posed as an underutilized weapon in the battle for industrial competitive and regional economic growth ... At university after university, new research centers were designed to attract corporate funding, and technology transfer offices were started to commercialize academic breakthroughs. But we may well have gone too far. Academics and university officials are becoming increasingly concerned that greater involvement in university research is causing a shift from fundamental science to more applied work ... Universities have been naively viewed as engines of innovation that pump out new ideas that can be easily translated into commercial innovations and regional growth. This has led to overly mechanistic national and regional policies that seek to commercialize those ideas and transfer them to the private sector. [1]

Keywords: Creative Doctorates, Creative Education, Creative Economy

1. Introduction

In a recent book, Richard Florida marked twenty years of transformation in the university's purpose. Following on from his analysis, the 2000s can best be represented through convoluted debates detailing how universities are implicated in diverse modes of economic and social engagement. The palette of achievement, assessment and validation has been brushed with words and phrases like innovation, creativity, lifelong learning and the knowledge economy. These imperatives probe the traditional structures and ideologies of higher education. Richard Florida found 'naivety' in tethering university research to commercialization. However, while tracking a movement from fundamental to applied science, the changes to the humanities generally and media, communication and cultural studies specifically were unmentioned in his comments. The role of the humanities and social sciences as content providers that feed screen and sonic media is increasingly significant via the transformation of delivery platforms through digital convergence [2]. In fact, when assessing Florida's full published research portfolio, the commodification of scholarly research in the humanities has been a minor part of his commentary on the creative industries, often slotted into discussions of his 'three T's'

-technology, talent and tolerance. Florida's *Cities and the creative class* included only one chapter – 'The university, talent, and quality of place' – that offered a presentation of the enmeshed relationship between the new economy and higher education. Perhaps recognizing this absence, he addressed this link a year later when, with Gary Gates, Brian Knudsen and Kevin Stolarick, he published a research project funded by the Heinz Endowments, titled The University and the Creative Economy.

In response to this document, which was released in December 2006, our article for Nebula has a single objective. Our goal is to evaluate how the rise of the professional doctorate in universities aligns with - or disconnects from - 'the creative economy.' Over the last decade, the institutional diversification of doctoral candidatures has operated in parallel with the burgeoning – in policy documents at least - creative industries. Our work takes the release of Florida's The University and the Creative Economy as an opportunity to reevaluate and recontextualize the two words 'professional' and 'doctorate.' [3] Florida wanted the purpose of a University to be more than 'pumping out new ideas.' While he is now considering the multiple roles of higher education in his more recent publications, the place of postgraduate education in facilitating technology, talent and tolerance is still

unmentioned in the most recent report. Instead, he remains interested in the concentration of students and the number of academics in particular cities. [4] Subject or discipline specialities, the number of postgraduates or the type or mode of masters or doctorate were not deemed relevant to his research. While revealing the number of students, academics, universities, patent applications, license income and invention disclosures [5] that build into the Bohemian Index and the three Ts, greater precision is needed when aligning the postgraduate experience and the creative industries. There is indeed much to discuss. Universities such as Deakin are offering a Doctor of Technology and managing what Tom Maxwell describes as "a negotiated compromise between the demands of the workplace and the requirements for academic rigour, especially in the need to relate the work to the literature and in the quality of the exegesis."[6] Reflecting upon such a statement, it seems that the imperatives of workbased case studies and problem solving can be awkwardly tethered to scholarship. Therefore, our paper teases out the costs, gains and consequences of 'work' framing postgraduate 'scholarship,' 'the creative' inflecting 'the industrial,' and 'the professional' connectivity to 'the doctorate.' We explore the creative approaches to research, and the consequences of housing them in the directives of a professional doctorate.

The Doctor of Philosophy programme, at its most basic, enrols scholars who have been successful in an under graduate degree and grants them the opportunity to develop research expertise within a specialist subject. Bob Hodge has referred to these as "disciplinary doctorates" in "hierarchically organized knowledges." [7] The objective is to make an 'original' contribution to knowledge. In the United Kingdom from the late 1980s – and through the direct influence of the Research Councils - the PhD began to incorporate notions of 'research training,' changing the character of the enterprise While many of these candidatures, particularly in the sciences, are funded by industry partnerships, the social sciences and humanities reveal a greater diversity of funding sources and enrolment patterns. A concrete and rapid commodification of intellectual property in the humanities and social sciences is rare, as is the production of scholarly monographs from theses. The transformation of the publishing industry has resulted in textbooks, with their revisions and editions, swamping more specialized academic publications. Notable exceptions include publishers such as Ashgate, Pluto and university presses. Yet because of this shrinking space for academic monographs, theses are often read by examiners, lodged in libraries or released as digital documents, but rarely accessed or cited. A few refereed articles may emerge, but the outcomes of this

scholarly effort are often difficult to track, measure or assess individually or institutionally. As a resource for research development and commodification, doctorates in the humanities and social sciences are an underutilized resource.

In this underused and yet historically and academically verified scholarly space, professional doctorates jut into relevance, opening new spaces for learning, writing and thinking. But the justification of education through the ideologies of vocationalism, generic competencies, skill development and work- related training also shrinks the domination of disciplinary doctoral candidatures in postgraduate education. In the last decade, there has been a proliferation of different modes of doctorates, with Stephen Hoddell, Deborah Street and Helena Wildblood locating five distinct categories or modes.

traditional, research-based PhD practice-based doctorates professional doctorates new route doctorates PhD by publication [8]

The problem emerging through such a diversity of offerings is how to ensure equivalence, as they all lead to a doctoral qualification. In the United Kingdom, the QAA in 2001 inferred that the learning outcomes for these diverse modes of doctorates should be the same.[9] This is a difficult and – frankly – impossible task. For example, Bill Green and Adrian Kiernander asked a series of question about how a Doctor of Creative Arts – as a practice-based doctorate - transforms the status, process and agenda of postgraduate scholarship.

What counts as and constitutes research? What counts as and constitutes a doctorate? What is the relationship between 'research' and the 'doctorate,' as a specific academic-educational credential? What relationship is there, or perhaps should there be, between 'research' and doctoral education? And finally: what are the specific circumstances and challenges for the Creative Arts in this context? [10]

These questions resonate awkwardly when assessing the emerging – and often productive - gaps between a conventional PhD in the Creative Arts, a Doctor of Creative Arts and the possibilities of professional doctorates in the Creative Industries or Creative Arts. Through their study, Green and Kiernander confirm that creative arts "might well go either way." [11] Like all liminal formations, a space for professional doctorates in creative arts – rather than practice-based work - raises a serious epistemological issue: what 'profession' is actually being discussed, labeled and described in and through this

qualification? While the 'outcomes' or 'results' are often challenging to existing concepts of artistic creativity and cultural production, they do not often have any immediate practical application in the way required by professional doctoral theses. Unlike nursing, medicine, engineering, accountancy or management, there are no professional bodies that accredit, examine or assess the competency or excellence of 'the professional.' In response to this absence, Gillies limited his definition of Creative Arts to the visual and performing arts, including design, music, drama and dance [12]. But the adjacent 'field' or 'area' that can be more strongly tethered to the workplace and 'the professions' - creative industries - is historically, theoretically and politically distinct from creative arts, involving branding, design, skill development and - more importantly - the commodification of creativity through intellectual property rights and patents. There has - so far - been no Doctor of Creative Industries.

Applying the concept of the professional doctorate in relation to different notions of 'the creative' is a useful way of opening up new scholarly spaces, but it may also confine and compress humanities research into the transitory and changeable economic needs of the 'creative industries.' There are opportunities in viewing proposals for professional or practice-based doctorates in the arts and media as choices to be fought over and new terrain to be developed and occupied, rather than as developments simply to be resisted in the name of the traditional role of the academy.

This rise of the professional doctorate has been part of a movement to align industry and the academy and is now being met with disquiet from Florida. This mode of doctorate not only captures a collective economic and educational transformation, but is meant to slot into an individual's career. As the Council for Graduate Education confirmed, the professional doctorate "is the personal development of the candidate (either in preparation for professional activity or to advance further personal skills and professional knowledge) and advancement of the subject or profession." [13] While most of these doctorates are not in the commercial sector - with the Doctorate in Business Administration being rarely awarded they are undertaken for career progression and to have a more rounded view of a profession, becoming a 'reflective practitioner.' Such a focus on the 'individual,' 'skills' and 'personal development' mobilizes language and goals distinct from the original contribution to knowledge that is the benchmark for the conventional 'disciplinary' doctorate. A danger of this movement is that current institutional/professional practice is codified

and validated as knowledge which is then seen as either challenging or trumping the abstract book-learning of unworldly academics. As early as 1993, the British government expressed its concerns with the Doctor of Philosophy.

The Government welcomes the growth of postgraduate courses. It is concerned, however, that the traditional PhD is not well-matched to the needs of careers outside research in academia or an industrial research laboratory [14].

This White Paper probed the industrial relevance of research degrees, and was encouraging what Florida's critiqued: that Universities arch beyond the academy and facilitate the commodification of ideas. More than a decade after the White Paper, the shape of much university research has moulded to the immediate needs of industry.

Before 1992, when all polytechnics were bound by the research degree regulations of the Council for National Academic Awards (CNAA), research degrees were fashioned as either a PhD or M. Phil. Since that year, institutions have been permitted to deploy their own research titles and curriculum. Yet a study in the late 1990s by Bourner, Bowden and Laing revealed that - at that time few of the new universities were transgressing beyond the two conventional qualifications. They argued that "the new client groups lie outside of academia and industrial research laboratories; in our study they lie in the professions of engineering, education and management."[15] They proposed the benefits of a professional doctorate that ensured a distinction from the PhD, but allowed the development of new modes and forms of scholarship for groups for whom PhDs serve little purpose. In other words, the Doctor of Philosophy would not be fractured by the professional doctorate, but separated through distinct goals, methods and modes of learning. New 'markets' of students would be attracted. Nearly a decade later, in reassessing this earlier research project, our goal is to reconfigure and reframe the suite of postgraduate offerings within the discussions about a creative economy emerging in the last three years. Perhaps the professional doctorate can continue to serve the needs of industry and personal development while the PhD can reclaim and retain its function in wider scholarship based in the disciplines. Yet Florida's critique is important: perhaps industry-led or channeled research will not create the most innovative scholarship. It may reinforce already existing practice, methods and agendas. Now that the professional doctorates have gained a strong foothold in both British and Australia universities, it is appropriate to recognize the diversity of doctorates and programmes while asking who are they for and the value of their approaches to research.

The first Doctor of Philosophy awarded by an English university was made in 1920. A DPhil at Oxford, [16] it was followed by a PhD awarded from Cambridge the following year. [17] Harvard awarded a Doctor of Education in 1921. A much wider gap awaited the first PhD awarded in Australia, which was in 1948 from the University of Melbourne. The University of Sydney followed three years later [18]. Of most significance for this project, Australia's first professional doctorate was the Doctor of Creative Arts at Wollongong in 1984. It predated the qualifications in law (1989) [19] and education (1990). In other words, while Australia was much later in introducing a Doctor of Philosophy, the nation's universities were much earlier initiating innovative and diversified higher degrees. This early establishment of a DCA led to structural change in postgraduate administration. The U.K. would ollow in the diversification of these awards after 1992. The first Ed.D emerged in England that year at the University of Bristol, the same year as the University of Warwick, the University of Manchester Institute of Science and Technology and the University of Wales introduced the Doctor of Engineering. By the end of the 1990s, three quarters of the pre-1992 universities and one third of the post-1992 universities delivered professional doctorates.[20] A decade later, the function of a professional doctorate was summarized by the UK Council for Graduate Education (UKCGE).

A Professional Doctorate is a programme of advanced study and research which, while satisfying the University criteria for award of a doctorate, is designed to meet specific needs of a professional group external to the University, and which involves members of that group in the design, development or delivery of the programme [21].

The Australian Vice Chancellors' Committee offered a similar determination: "the Professional Doctorate is specific to a discipline, aimed primarily at practitioners in the field. The programme of study would be expected to include advanced coursework, project activity and a research component."[22] Their imperative was for the qualification to be specifically aimed at workers in a field, with the curriculum designed through a partnership between professional groups and universities. Research is a part of the submitted degree, but coursework and projects are integral to the methods of delivery and assessment.

This narrative of professional doctoral development shadows the emerging 'requirements' for skill development in the creative economy. As Bowden, Bourner and Laing reported, the increase in the number of these specialist and often industry-inflected doctorates has been in the areas of education, business administration and engineering.[23] But there has been a more productive and provocative shift in the determination of research in the professional doctorate degree, with methodological innovation in practice-based research, the deployment of action research and reflexive consideration of the role of the scholar in scholarship. Bowden, Bourner and Laing describe, a shift in the role of the doctoral researcher from spectator to agent. We hear much today of the importance of evidence-based practice. The new generation of professional doctorates in English and Australian universities offer the prospect of practice-based evidence. This is an important development as it allows a new tributary to flow into the stock of knowledge, one that flows from the advancement of professional practice [24].

While recognizing this innovation, a provocative question still remains as to whether this alignment of engineering, education and management with higher degrees at universities cannibalizes – rather than proliferates already existing forms of scholarship. In this earlier research, Bourner, Bowden and Laing recognized a distinction in the English university sector: pre-1992 universities 'protected' the doctorate, while post-1992 universities denied the diversification of doctorates.

Whereas the 'old' universities have been concerned to protect the 'gold standard' of the PhD by allowing the development of alternative titles for professional doctorates, the 'new' universities have been more concerned to avoid proliferation of new doctoral titles so that variants have been squeezed into the PhD. This may reflect the greater self-confidence of 'old' universities as long-established awarding bodies [25].

Significantly, the decision of 'old' universities conflates with Florida's recognition that university research should offer more than industrial and work-related goals. The difficulty for the 'new' universities was that they had packed diverse programmers and agendas into the 'traditional' doctorate. Our earlier discussion of the creative arts shows the intricate and ambiguous nature of these decisions and definitions of disciplines, practices and professions, and the impact on inter-disciplinary and liminal areas of study. Provocatively, we therefore raise a critical question in our creative approach to research doctorates.

2. What is Education for? [26]

Tom Bentley asks a crucial question about the purpose of education. A more specific inquiry that undergirds this paper is to assess how this plurality of higher degrees impacts on the arts, humanities and social sciences, and how this diversification may dovetail into the creative economy. Of attention is how creative arts, creative industries and media studies are transforming the role and purpose of higher degrees. There is a cost of vocationalism and interlinking education with work-related learning, including the fragmentation of logical patterns in the development of expertise, the de-centering or displacement of areas that may not be of direct economic benefit, and an implicit critique of traditional degree structures and methods. For example, Usher was clear in his determination that the knowledge economy 'replaces' – rather than enhances or diversifies - other directives for education.

The first thing that can be said about this is that it [the knowledge economy] replaces an epistemological with an economic definition of knowledge. Knowledge becomes a factor of production, more critical in the production process as economic performance comes to rely more and more heavily on knowledge inputs ... Economic growth is now seen to be vitally dependent on the development of an infrastructure that facilitates and enables sustainable knowledge development [27].

Even in the EdD, the vocabulary from the creative industries palette - of partnership, outcomes and experiences – permeates the discourse.

The EdD is based on a partnership between the University and the educational employers to provide candidates with an integrated set of experiences enabling them to demonstrate, through research scholarship, a set of outcomes reflecting the qualities prized in modern professional educators [28].

Experiences enable - and scholarship produces - a set of outcomes for professionals. Underdiscussed in the literature is how affirmations of lifelong learning and professional/personal development can also mask a discussion of the commercialization of education. Terry Flew reported that, learning, creating and applying knowledge have become a continuous imperative for individuals and organizations, giving rise to a new idea – lifelong learning. This means that people will need to return to formal education more often during their lifetime and that learning will become a more explicit goal in activities not formally designated as education, especially work.

There is now more knowledge, and more demand for it, than can be contained within a public sector infrastructure. New modes of access and knowledge creation are required [29].

Terry Flew was resident in Australia when writing

these words. The context for the crispness and clarity of his argument - without caveat - needs to be acknowledged. A decade of neglect in humanities and social science research in universities had reached such a scale that Mike Kent reported that "it might be that it is too late now to act to save the higher education sector in Australia as it now exists."[30] The introduction of the Research Quality Framework in Australia, which was a flawed reproduction of the Research Assessment Exercise, decentres peer review and evaluation of scholarship in favour of 'impact' assessment through qualitative metrics.[31] Therefore, the success of the professional doctorate in Australia must be analyzed in a context where research is being assessed for its impact and relevance to industry or organizational performance, not disciplinary innovation or recognition by peers.

Mark Tennant, like Flew, wrote about higher education from the crucible of Howard's Australia. He argued that affirming a division, difference or distinction between PhDs and professional doctorates is not an adequate mechanism through which to convey the costs and consequences of framing postgraduate education within the creative industries and the knowledge economy. Tennant contends that this analytical separation of the doctorates in the research literature overshadows a more significant discussion about the shift from 'autonomous student' to 'enterprising self.' [32] The words and phrases 'flexible,' 'reflexive,' 'managed information,' 'entrepreneurial,' 'collaborative' and 'situated knowledge' have hooked into policies, curricula and mission statements. While many of the battles about the legitimacy of a non-vocational purpose for education have been lost in the undergraduate curriculum, the doctorate remains a site of debate, conflict and questioning about the role of economic and work-related objectives in scholarship.

In the United Kingdom, the private sector already spends more on training and education than government [33]. In response, universities have become competitive and market-oriented, using web-based platforms to sell their courses beyond the geographical limits of student catchment areas. Yet there has not only been a transformation in the mode of delivery, but also in the curriculum itself.

Mark Tennant confirmed the scale of this change.

Perhaps one of the most important shifts is that the demand for the 'relevance' of university curricula and credentials, while not new, has certainly taken on a new turn in the knowledge economy. Relevance no longer equates with the 'application' of knowledge 'to' the workplace, rather, the workplace itself is seen as a site of learning, knowledge and knowledge production, hence the term 'working knowledge.'[34]

The professional doctorate was formed and valued as a method to bridge industry and university, professional development and scholarship. But even in the sciences, Partha Dasgupta and Paul David have recognized the importance of separating academic science and science geared for industry, as short-term benefits would be emphasized over long-term developments that may not immediately be profitable [35].

Creative industries courses and degree programmes emerge from media, communication, art, design and cultural studies departments. The history of many of these programmes before the 1980s was shaped by the legacies of scholars such as Raymond Williams, Richard Hoggart, E.P. Thompson and Stuart Hall. Raymond Williams in particular aimed to transform education for working class citizens [36]. Preparing students for the transition to work was not the goal. The aim was to develop consciousness about all aspects of their lives - including their experiences of, and aspirations for, paid employment - through the insights of education. Currently, this project has been inverted, with universities 'mirroring' the workplace, not challenging the workplace. Without recognizing this history, Linda Ball reported on 'the role of higher education' in industry.

For its part, higher education will need to understand the future of creative enterprises to help students and graduates to learn about the industry and how to access training and development opportunities. The implications are that staff need to update their knowledge about the world of work, take more responsibility for preparing students for the transition to work and encourage multidisciplinary working to mirror what is happening in the workplace. This involves a shift towards an outwardlooking culture providing a bridge with the real world, extending beyond the formal undergraduate curriculum [37].

Many ideologies dance through these sentences. The ivory tower of scholarship is invoked and opposed to the assumption that micro-businesses, the 'independents' and the 'creative class' are 'the real world.' Repressed notions include the possibility that university academics hold expertise that may have a value additional to the workplace and its immediate demands, or even that they are knowledge workers in and of themselves who hold a clear-headed understanding of their student cohort and their curricula objectives. For Ball, the three year undergraduate curriculum in art and design becomes the place where all the life skills required for the 'world of work' need to be provided.

There is a consequence of such statements for postgraduate education. If ambition is capped at 'training and development opportunities,' then professional doctorate will alter the brief of the higher education sector. Clearly the DCA is an attempt to build the relationship between 'work' and 'university,' 'creativity' and 'scholarship.' The question is why researchers in subject areas and scholarly disciplines would wish to 'mirror what is happening in the workplace.' Florida, Gates, Knudsen and Stolarick believe that researchers can aim too low in their standards, innovation and curriculum because of such assumptions about students, teaching, learning and the 'world of work.'

The university's increasing role in innovation and economic growth stems from deeper and more fundamental forces. The changing role of the university is bound up with the broader shift from an older industrial economy to an emerging Creative Economy ... Innovation and economic growth accrue to those places that can best mobilize humans' innate creative capabilities from the broadest and most diverse segments of the population, harnessing indigenous talent and attracting it from outside [38].

Their goal is to open out universities to the diversity of the population, not to narrow its interests to business and the professions. Indeed, what if the current 'the world of work' is not the best practice for the next generation's innovators in art, design, architecture, popular culture or screen and sonic-based media?

New knowledges, like media studies and cultural studies, do not erase old knowledges but they may change the credibility granted to these knowledges. Mark Tennant was rightly critical of the binaries that separate paradigms and degree structures, desiring a more integrated approach.

By making a conceptual (and binary) distinction between different types of knowledge, different types of doctoral degrees and different types of persons undertaking such degrees, universities have attempted to incorporate 'working knowledge' as an important addition to their more traditional and enduring role of working within disciplinary boundaries. But this scenario is not sustainable, largely because the incorporation of working knowledge into universities essentially subverts disciplinary communities by challenging what constitutes legitimate knowledge ... Moreover, the incorporation of working knowledge into universities demands new structures and new ways of 'doing business' which create significant policy and practical tensions [39].

The separation of worker and scholar is unhelpful. Through these binary distinctions, there remain similarities between the 'modes' of doctorate. They still require the supervision of a student by an expert in the field. But the separation of the worker-earner-learner from the scholar-discipline- specialist has impacted on all postgraduate education. In Australia, the Council of the Deans and Directors of Graduate Studies issued a Statement of Generic Skills for Doctoral Candidates, with a Joint Statement of the Research Council/AHRB (now AHRC) Postgraduate Skills Requirements emerging in the United Kingdom. All doctorates are changing, beyond the demarcation of professional or disciplinary doctorates The permeation of 'generic skills,' rather than specialist knowledge, is having an effect. There is motivation and reasons to enrol in a professional doctorate. Jerry Wellington and Pat Sikes found that their students in the EdD enjoyed the structure of the degree and how it fitted into the pattern of their lives [40]. They became "researching professionals," [41] forging a new work-based identity. Yet other modes of identity formation through education can be lost, denied or underwritten in such a narrative.

3. The New University?

The new economy seems to offer most people rather little. Society is becoming more unequal. Experience of failure is becoming widespread. More of the economy resembles Hollywood: only a handful of the hundreds of projects under development become films, only one in six films released makes money and fewer still become hits [42].

4. Charles Leadbeater

Leadbeater's argument about Hollywood is even more decisively applied to Higher Education. Many forms and modes of doctoral qualifications are being offered. Examinations are taking place and testamurs have been released. Yet there are few doctorates that contribute in a measurable and quantifiable way to social, economic or political change. They may provide professional development for employees. They may improve productivity and efficiency. But they also raise important questions about the point and purpose of higher education and scholarship. If our piece has an agenda, then it is to indicate a danger and as a warning to proceed with caution. The issue is not just - or indeed mostly - about the subservience of universities to the commercial sector or the need of industry. Most professional doctorates, unlike much applied research, are in public or service sector areas. The issue is whether the power/status of the 'professional' is reinforced at the expense of non professionals, and through the promotion of an a priori dominance of 'real world' knowledge drawn from current practice over new theoretical or research-based empirical knowledge.

Terms such as 'the economy,' 'work,' 'industry' and 'vocation' may too easily be conceded to a reductive rendering of the university's role. There is important work to be commenced in this debate that is blocked through the premature retreat to a moral/intellectual high ground. It is more effective to investigate the ambiguities and challenges of educational history. The study of earlier modes and rationales for doctoral education is not only productive but politically revelatory. The current system, punctuated by the vocabularies of skill development, work-based training, fees and debt, is distinct from the humanist model offered by Henry Newman. His 'idea' of the university has little tether to our current institution. Much creative industries analysis has been based on the university being the backbone and foundation for economic development, but this structural role lacks actual content. Through the industrial revolution, the split between tradition and practicality foreshadowed the division between education and training in the twenty first century. The dual purposes of universities - teaching and research - have consequences for the management of both.

The relationship between professional doctorates and/ in the creative industries can be over-simplified through valuing of the 'world of work' over the academy. Of more significance is how we respect and develop the social processes of education, health care, material production and reproduction, sustainable development and cultural production. The seizure of the terms 'economic,' 'wealth-creation' and 'innovation' by a narrow market economy vision (one which would have amazed and appalled Adam Smith) has compressed the complex goals of university research into only being valuable if the postgraduate earns a high individual salary (the 'graduate premium') or if it furthers Gross Domestic Product. If a qualification does not fulfill this criterion, then it is discarded as of little or no value. In 1994, Gibbons, Limoges, Nowotny, Schwartzman, Scott and Trow described this new knowledge society and tracked the movement of knowledge production away from universities. [43].

Application and development, not innovation and exploration, became the imperative. Such a model depleted the role, function and purpose of a university. Perhaps the professional doctorate was a way to reclaim some territory through aligning application with knowledge and work with learning. But the consequences of proliferating doctorates have been stark. Both the 1996 Harris report [44] and the 1997 Dearing report [45] expressed disquiet about the state and rationale of postgraduate qualifications.

For Florida, Gates, Knudsen and Stolarick, universities remain a "creative hub," [46] the basis for developing technology, talent and tolerance. However they also stress the necessity for framing regional strategies and a willingness to "mobilize and harness creative energy." [47] Such phrases are difficult enough to translate into curriculum for undergraduates. It is not only complex but perhaps unproductive to codify such objectives into a skill set for doctoral education. However it is clear that creative approaches to research remain a project and agenda for not only this journal, but the university sector. Is it the time for pragmatic compromise or a moment to reclaim words like originality, scholarship and excellence? Our role as workers in the field is to ensure that universities remain relevant, but that relevance is tempered and shaped by much more than only work-based skills. Perhaps by emphasizing the priority of use-value over exchange-value - in a new, fresh and broad vision of the 'real world' - universities can productively align their purposes with not only those of the professions and the new creative economy, but also those of the broader population, whose needs all these organizations should seek to serve.

REFERENCES

- [1] Richard Florida's Cities and the creative class, (New York: Routledge, 2005), pp. 143–4.
- [2] Stuart Cunningham charted this realization in his article "Social and creative disciplines in ascent," The Australian Higher Education Supplement, July 10, 2002, pp. 33. He stated that "we can no longer afford to understand the social and creative disciplines as commercially irrelevant, merely civilising activities. They must be recognized as one of the vanguards of the new economy." Therefore, a productive tension emerges between Cunningham's welcoming of a 'vanguard' and Florida's caution at Universities 'pumping' out new ideas.
- [3] We also note and acknowledge the literature tracking the transformation of the professional doctorate. Please refer to TomMaxwell, "From first to second generation professional doctorate," Studies in Higher Education, Vol. 28, No. 3, August 2003, pp. 279–291.
- [4] R. Florida, G. Gates, B. Knudsen and K. Stolarick, The University and the Creative Economy, December 2006.

Table nine in this document focuses on "Students concentration." This heading refers to the proportion of students in a specific city and region, not - with a missing apostrophe - the capacity of scholars to understand their lectures, tutorials or readings.

- [5] ibid. Table six reports "University Licensing Income and Startups," and table seven reports the "Correlations between University and regional technology measures."
- [6] Maxwell, pp. 281.
- [7] B. Hodge, "Monstrous knowledge: doing PhDs in the 'New Humanities," in A. Lee and B. Green (eds.), Postgraduate studies/Postgraduate Pedagogy, (Sydney: Centre for Language and Literacy and the University Graduate School, 1998), pp.114.
- [8] S. Hoddell, D. Street, H. Wildblood, "Doctorates converging or diverging patterns of provision," Quality Assurance in Education, Vol. 10, No. 2, 2002, pp. 61-70, Emerald FullText Article, http://www.emeraldinsight. com/Insight/ViewContentServlet?Filename=Published /Emerald, accessed February 14, 2007.
- [9] Quality Assurance Agency for Higher Education, The National Qualifications Framework, The National Committee of Enquiry into Higher Education, www.leeds.ac. uk/ncihe, 2001.
- [10] B. Green and A. Kiernander, "Doctoral education, professional practice and the creative arts: research and scholarship in a new key?" in B. Green, T. Maxwell and P. Shanahan (eds.) Doctoral education and professional practice: the next generation?, (Armidale: Kardoorair Press, 2001), pp. 111.
- [11] ibid., pp. 112.
- [12] M. Gillies, "The Arts," in Knowing Ourselves and Others: the humanities in Australia in the 21st Century, Vol. 2: Disciplinary Surveys, (Canberra: The Australian Academy of the Humanities, 1998), p. 262-263.
- [13] United Kingdom Council for Graduate Education, Practice-based doctorates in the creative and performing arts and design, (Warwick: UKCGE, 1997).
- [14] Office of Science and Technology, Realising our potential

 strategy for science, engineering and technology, (London: HMSO, 1993), pp. 3.
- [15] T. Bourner, R. Bowden and S. Laing, "Innovation or standardisation in research degree awards: lessons from the new universities," Higher Education Review, Vol. 31, No. 2, 1999, pp. 25.
- [16] K. Noble, Changing Doctoral Degrees: an international perspective, (Buckingham: Society for Research into Higher Education and Open University Press, 1994).

- [17] R. Simpson, How the PhD came to Britain: a century of struggle for postgraduate education, (Guildford: Society for Research into Higher Education, 1983).
- [18] L. Johnson, A. Lee and B. Green, "The PhD and the autonomous self: gender rationality and postgraduate pedagogy," Studies in Higher Education, Vol. 25, No. 2, 2000, pp. 135-147.
- [19] P. Shanahan, "Professional doctorates other than the Doctor in education in Australian universities: some comparative data," in T. Maxwell and P. Shanahan (eds.), Which way for professional doctorates: context and cases, Proceedings of the 'Which way for professional doctorates?' Conference, Coffs Harbour, October 16-18, 1996, pp. 13–28.
- [20] This transformation of British universities, and the split between the 'old' and 'new' universities was studied by Tom Bourner, Rachel Bowden and Stuart Laing in "Professional Doctorates in England," Studies in Higher Education, Vol. 26, No. 1, 2001, pp. 65–83.
- [21] United Kingdom Council for Graduate Education, Professional Doctorates UKCGE Report, (Warwick: UKCGE, 2002).
- [22] Australian Vice-Chancellors' Committee, Code of practice for maintaining and monitoring academic quality and standards in higher degrees, (Canberra: AVCC, 1998).
- [23] R. Bowden, T. Bourner and S. Laing, "Professional doctorates in England and Australia: not a world of difference," Higher Education Review, Vol. 35, No. 1, 2002, pp. 6.
- [24] ibid., pp. 21.
- [25] Bourner, Bowden and Laing, "Professional doctorates in England," Studies in Higher Education, Vol. 26, No. 1, 2001, pp.77.
- [26] T. Bentley, "Learning beyond the classroom," from I. Hargreaves and I. Christie (eds.), Tomorrow's Politics, (London: DEMOS, 1998), pp. 83.
- [27] R. Usher, "A diversity of doctorates: fitness for the knowledge economy?" Higher Education Research and Development, Vol. 21, No. 2, pp. 144.
- [28] N. Baumgart and K. Linfoot, "The professional doctorate in education: a new model, in T Maxwell and P. Shanahan (eds.), Professional Doctorates: innovations in teaching and research, Conference Proceedings, Coffs Harbour, October 8-10, 1998, (Armidale: University of New England, Faculty of Education, Health and Professional Studies).
- [29] T. Flew, "Educational media in transition: broadcasting,

digital media and lifelong learning in the knowledge economy," International Journal of Instructional Media, Vol. 29, No. 1, 2002, pp. 50.

- [30] M. Kent, "Not dead, but maybe extinct," AQ, November-December 2006, pp. 10.
- [31] G. Maslen, "Top pay to tempt key staff," The Times Higher, February 16, 2007, pp. 10.
- [32] M. Tennant, "Doctoring the knowledge worker," Studies in Continuing Education, Vol. 26, No. 3, November 2004, pp. 431.
- [33] Flew, pp. 83.
- [34] Tennant., pp. 431
- [35] P. Dasgupta and P. David, "Toward a new economics of science," Research Policy, Vol. 23, No. 3, May 1994, pp. 487–521.
- [36] R. Williams, Politics and Letters, (London: New Left Books, 1979).
- [37] L. Ball, "Preparing graduates in art and design to meet the challenges of working in the creative industries: a new model for work," Art, Design & Communication in Higher Education, Vol. 1, No. 1, 2002, pp. 11.
- [38] Florida, Gates, Knudsen and Stolarick, op. cit., pp. 2.
- [39] Tennant, pp. 434.
- [40] J. Wellington and P. Sikes, "A doctorate in a tight compartment: why do students choose a professional doctorate and what impact does it have on their personal professional lives?" Studies in Higher Education, Vol. 31, No. 6, December 2006, pp. 729.
- [41] ibid., pp. 729.
- [42] C. Leadbeater, Living on thin Air, (London: Viking, 1999), pp. 219.
- [43] M. Gibbons, C. Limoges, H. Nowotny, S. Schwartzman, P. Scott, M. Trow, The new production of knowledge: the dynamics of science and research in contemporary society, (London: Sage, 1994).
- [44] M. Harris, Review of Postgraduate Education, 1996, www.qaa.org.uk (.)
- [45] R. Dearing, Higher education in the learning society, The National Committee of Enquiry into Higher Education, 1997, www.leeds.ac.uk/index.htm(.)
- [46] R. Florida, G. Gates, B. Knudsen and K. Stolarick, The University and the Creative Economy, Heinz Endowments, December 2006, pp. 1.
- [47] ibid., pp. 3.