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Publish or Perish?: Investigating the doctorate by publication in writing

Abstract:

Although more common in the disciplines of science, health, mathematics and related fields of research, the PhD by Publication has recently joined the Professional Doctorate as increasingly available forms of research higher degrees in the arts and humanities in Australia. As the PhD by Publication appears to be particularly appropriate for those with the advanced skills necessary to undertake research in writing, this paper will map the scope and form of the degree to investigate its appropriateness in the Australian higher education context. By auditing the available data on this degree in Australia and internationally, this paper outlines a range of issues and implications for stakeholders in the PhD by Publication – including candidates, supervisors, examiners, institutions and the writing discipline itself. In doing so, this examination will investigate whether this degree can provide an individually, institutionally and disciplinary viable alternative for some higher degree candidates.

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Keywords:

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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 (Laing & Brabazon 2007: 265).

Introduction

In the current environment, when entry level academic positions increasingly require both a doctoral-level qualification and a publishing history, and various national qualitative research assessment exercises value publications more than qualifications, the PhD by Publication[1] could be seen to be an appropriate choice of research higher degree for individuals and their institutions. Although more common in the disciplines of science, health, mathematics and related fields, the PhD by Publication has, during the previous decade, joined the Professional Doctorate (composed of coursework and research elements, but with a professional practice orientation)[2] as one of the two additional forms of higher degrees by research (HDR) available to the arts and humanities in Australia (Sheely 1997: 656). While the Professional Doctorate is also of interest in the context of the discipline of writing, the below discussion will focus on the PhD by Publication, a higher degree which is also known as the PhD by Published Papers and PhD by Published Works. The description is made in relation to the traditional PhD attained by thesis, which may or may not be published after (and rarely before) it has been presented for examination.

Many students find completing a research degree a particularly demanding task, and speak in terms, as do Elphinstone and Schweitzer in *How to Get a Research Degree: A Survival Guide* (1998) and Hinchley and Kimmel in *The Graduate Grind* (2000) of enduring its drudgery. Publication titles such as Nelson's 'Doctoralness in the Balance', subtitled 'The *Agonies* of Scholarly Writing in Studio Research Degrees' (my italics) (2004) and Boufis's 'Strange Bedfellow: Does Academic Life Lead to Divorce?' (2003) sum up an ambience of anxious trauma surrounding higher degree study. As the PhD by Publication would seem to be particularly appropriate for those with the advanced skills necessary to undertake research in writing, this paper will map the scope and form of the degree in order to investigate its appropriateness, weighing up (in cost-benefit style) its potential advantages and concerns, and particularly in terms of its potential to lessen, or add to, the anxieties for those involved.[3]

Background: The 'traditional' PhD

Attaining a Doctor of Philosophy (PhD) is commonly thought to embody reaching the apex of scholarly learning and enquiry. It is imaged (and marketed) as the

internationally recognised "gold standard" of doctorates (Jolley 2007: 228) and the "pinnacle" of post-secondary education (UKCGE 2002: 47). In these terms, the PhD is intellectual, rigorous and demanding in equal measure and – doctoral degrees having first been conferred by the University of Paris in the 12th century (Bourner, Bowden & Laing 2001) and then elsewhere in medieval Europe (Park 2007: 4) – sanctified as such by centuries of tradition. It is, indeed, the only recognised form of doctoral degree in many countries (Park 2007: 4).

However, in terms of tradition, the University of Paris and other medieval doctorates were closer to what we currently understand as the Professional Doctorate than today's Doctor of Philosophy, being granted as a license to teach in universities. The PhD as we know it (largely independent research[4] resulting in a substantial piece of research reporting, the thesis) is a relative recent arrival in academia, with its rebirth in Germany in the early nineteenth century (Bourner, Bowden & Laing 2001; Park 2007: 4), and introduction into the USA in modified form in the mid-nineteenth century and the UK only in 1917 by the University of Oxford (Jolley 2007: 227). The Australian PhD is a post second world war phenomenon, with the first PhD awarded in 1948 by the University of Melbourne. With only 137 PhDs awarded Australia-wide in 1960, the degree has experienced most growth most since the 1970s (Nelson 1993: 3; Lesley, Lee & Green 2000: 136) and especially from the 1990s, with PhD enrolments doubling in the decade from 1994 to 2003 to over 35,000 and, between 2001 and 2003, an average of 5,998 PhDs completed per annum (Valadkhani & Ville 2007: 11). A detailed study, based on the theses lodged in Australian libraries, estimated at least 51,000 PhD theses had been completed in Australia to 2003 (Evans et al: 7).

International diversity (see, Noble 1994) further challenges the idea of hallowed tradition, with the PhD in the USA, Canada and Denmark almost always incorporating a significant taught coursework element, unlike those in the UK and Australia. The UK now has, however, a number of 'taught doctorates' with significant coursework elements but still including a research component (UKCGE 2002) but is adopting the USA model as well, which is becoming known as the 'New Route' British PhD (Jolley 2007: 228). Despite the existence of the Professional Doctorate in Australia and the UK, the research-based PhD in those countries is itself also in the process of becoming 'professionalised' at some universities, with some programs encompassing a workplace oriented framework and experiences (Jolley 2007: 229; Kroll & Brien 2006) in order to for the research degree to meet professionally-focussed objectives that cannot be met by a thesis alone. The uniquely Australian 'PhD by Project' for instance, in the disciplines of architecture, design, business, engineering and education (Usher 2002) includes, like taught and Professional Doctorates, coursework and is practice, and particularly workplace or community focused, but it does not have to include a research element – although (to add more complexity) this is not precluded. Overall, internationally and in Australia, imperatives articulated by governments and industry for high level training in generic skills is resulting in what could be characterised as the move from discipline specific knowledge to "problem solving and

knowledge management approaches" (Gilbert 2004; Valadkhani &Ville 2007: 2). This has seen the 'traditional' PhD shifting away from the a focus on the acquisition of "substantive knowledge" to outcomes that have an increased emphasis on "technical skills and craft knowledge" (Pole 2000: 107; Ball 2002) – trends that would seem to support a degree such as the PhD by Publication.

Some propose that this is a flawed orientation, and that in our age of "supercomplexity", the future demands of employers are "unpredictable" – and developing advanced research skills is the best outcome to be gained from all research degrees (Lee 2007: 680). Few, however, problematise this subservient relationship between higher degree study and the needs of the workplace. Laing and Barbazon do, characterising this recent development in policy and practice as the capping of educational ambition at the provision of professional training, and "the promotion of an a priori dominance of 'real world' knowledge drawn from current practice over new theoretical or research-based empirical knowledge" (2007: 266). The implications of this commercialisation of knowledge provision jeopardise, according to Maxwell, "the idea of education as a service provided by the government and as a given right for the participation of citizens". Instead, it images education as "trade, available only to those consumers who can afford to buy it" (2003: n.p.).

A report last year in *The New York Times* alerted readers to what many universities, policy makers and researchers internationally have recognised for some time: that the PhD may be a dysfunctional degree (Berger 2007). It has high attrition rates (50 per cent or more across Australia, the USA and Canada, with higher rates in the humanities and social sciences than in the sciences and engineering fields (Halse 2007: 322) and lengthy completion times (known internationally as "time-to-degree") in many countries (with averages of 10.5 years in Canada, and from 8.2 to more than 13 years in the USA (Berger 2007). Government funded and other Australian studies for a decade have noted a mismatch between high numbers of graduates, and a lack of labour market demand for doctoral qualifications in many fields (see, for instance, Kemp 1999). There has also been a flurry of anxious media attention regarding the quality of doctoral-level degrees. This has included "allegations of silliness in relation to thesis content … 'softness' in relation to entry, rigour and assessment … [and] suspect conduct and/or credentials" (McWilliam et al 2005: eprint 6). The academic value of the Professional and taught doctorates, and their equivalence to the research PhD, has also been doubted (Jolley 2007: 231).

Contexts and systemic issues

Introduced in the 1960s into the UK, the PhD by Publication is – although there is no consistency across institutions – most usually undertaken by already employed academic staff and consists of published work, a 5,000 to 10,000 word critical appraisal of that published work set within the context of the research, and a compulsory oral examination utilising conventional HDR academic standards. Many

European countries have a form of PhD by publication in their requirement of the mandatory publication of papers before thesis submission (CRAC 2008) although the named degree is less common. The formalised degree is extremely rare in the USA – the name 'PhD by Publication' appears to be trademarked by the Emerson University – although the practice of granting a PhD on the basis of prior publications is not unknown as a departmental initiative. In Australia, an examination of the some ten universities that offer the degree (located through a web search) reveals no consistency in terms of the framing policies (except for the Australian Qualifications Framework accreditation statement[5], entry requirements, conditions of candidature, resulting form or examination guidelines.[6] Institutional regulations underpinning the PhD by Publication in the UK show similar variation, with no consensus on length, purpose or format (Draper 2008). In Australia, this variation ranges from institutions that accept previously published work (including works that are not academic or scholarly) and require little or no campus participation[7] to those which have a significant minimum enrolment period and only allow the consideration of scholarly work published (or submitted for publication) during the period of enrolment (Starrs 2008). Some Australian universities require all externally peer refereed publications and/or specify certain and/or "reputable" journals for these publications, while others allow works that are self-refereed and/or self-published (published, for instance in self- or co-authored/published books or journals). Some require all work to be published or in press, and others accept works that are still at the submission stage of the process. The acceptability of, and framing conditions regarding, co-authorship similarly differs. Outcome options range from almost totally published work (or works) to a mixture of traditional theses chapters and publications; and from thesis submission in the traditional form, that is, printed and bound with an abstract, framing introduction, literature review, conclusion, bibliography and appendices, providing a proof of how the publications produced together answer the research question – to considerably less formal, thesis-like submissions.

In the academic research environment, publication is largely understood as peer reviewed publishing – books, book chapters, journal articles and refereed conference papers. Publication, by dictionary definition, similarly privileges print as in "the publishing of something, especially printed material for sale" and "an item that has been published, especially in printed form". This relation to print is, however, not totally exclusive and even the most basic dictionary definitions also include the more general function of the transmission of data or knowledge, as in "the communication of information to the public". Even in relation to print publication, however, what is a "reputable" journal and who mandates this? National and international research quality assessment regimes have been interrogated in terms of whether biblio- and other metrics such as citation rates are valid measures of quality (Seglen 1998) or even real use[8] (Nicholas et al 2006). Recently, a number of high-profile international journals have opted out of ranking systems, for reasons including that they do not take into account the locations where truly groundbreaking work may be published, are

prejudicial for specialist and non-English language journals, and/or are being undertaken by 'experts' of dubious capabilities in relation to specific subject areas (Newman 2008: 7). Moreover, such standardised judgemental regimes are in constant modification, while their impacts on the work of both individuals and disciplines are still to be determined (Redden 2008). Even the bedrock of scholarly communication, peer review,[9] is not above question, with assertions that it is not only untested, and has uncertain effects (Jefferson et al 2002) but also that it:

> is unreliable, unfair and fails to validate or authenticate; … unstandardised and idiosyncratic; … its secrecy leads to irresponsibility on the part of reviewers; … it stifles innovation; … [and] causes delay in publication (Mark Ware Consulting et al 2008: 1).

While alternative forms of writing and review – such as collaborative wikis and post-publication review – may provide more timely, democratic and sophisticated systems of validation (Masnick 2006), they are not counted in the current systems. As there is more at stake in achieving publication, there is also evidence of increasing levels of academic misconduct among writers, referees, editors and publishers (CRI 1995, Smith 2002, Calabrese and Roberts 2004). The size of emergent and specialised areas may also create an unavoidable, but murky, situation where relevant national and international publications are edited and reviewed by colleagues of various levels of acquaintance (Price, Drake & Isam 2001).

The vast number of peer-reviewed journals and articles may itself be challenging to writers and readeres. *Ulrich's Periodicals Directory* claims to be the "authoritative source of bibliographic and publisher information on more than 300,000 periodicals of all types".[10] In 2006, Morrison established the directory included some 56,777 journals classed as "academic/scholarly", of which 24,340 were refereed. Another study that year estimated only a slightly lesser number of peer-refereed scientific journals – 23,750 (Björk, Roos & Lauri 2008: 1). In 2007, Meho claimed the "sobering fact" that some ninety per cent of all refereed scientific articles published are never cited, and as many as half these articles are "never read by anyone other than their authors, referees and journal editors" (32). Despite the fact that this assertion is science-based, this does not discount the clear message that there is a great deal of information being published that is not resulting in any form of communication. Another study suggests that, even if this information is being found and accessed, it is not being read in any detail or entirety. A recent analysis of the Ohio Library and Information Network (OhioLINK)[11] electronic article and journal downloads indicated that all accessed articles (many of which may result in citations) were, on average, viewed for under a minute, while abstracts were viewed for approximately half a minute (Nicholas et al 2006). Such behaviour has been widely identified and named:

> most visitors to scholarly sites view only a few pages, many of which do not even contain real content, and in any case do not stop long enough to do any real reading. This is either a symptom of a really worrying malaise – failure at the library terminal –

or maybe a sign that a whole new form of online reading behaviour is beginning to emerge, one based on skimming titles, contents pages and abstracts: we call this "power browsing" (CIBER 2008: 31)

Whether this level of engagement with their work is acceptable to HDR candidates in writing is a question that candidates need to ask before setting out on a PhD which may produce mainly such material.

Benefits and challenges

Most obviously, in terms of benefits, if they are producing new work and seeking refereed publication, candidates may exit the PhD by Publication with a portfolio of (perceived as) quality publications – "the currency of academia" (Starrs 2008) – as well as a doctoral-level qualification. They will, moreover, have the mandated assistance of their supervisor and peer reviewers and editors in producing those publications. Such a working process may divide the often-overwhelming research project into smaller, more manageable sections, each with deadlines, which may provide a clear, outcome-driven framework for the project. Working towards publication may focus both candidate and the supervisor on the whole of the research process, including the end point of the communication of findings; while interfacing with publishing personnel is one way of attempting to fight the isolation that many characterise as being typical of the doctoral experience. The candidate may begin more quickly to establish a reputation in the field, to "stake their territory" in research terms (Student Services UQ: n.d.), and may process their data in more a "ethical" manner, in that they are more quickly honouring dissemination undertakings made to survey respondents or interviewees (Hegney 2007). Completing publications progressively throughout the candidature may ease some of the pressure involved in preparing one final submission for examination, both in terms of mass and quality as work already published has already been vetted and authenticated by the publication process (Starrs 2008).

The process may also provide a form of professional development for the supervisor who may learn more about the publication process (Galligan et al 2003; Boud & Lee 1999: 9), and can involve an increased publication rate for that supervisor in terms of co-authored work. Institutions may widen the range of research degrees they can provide, increase their publication rates and research funding, and (in the case of co-authorship) break down the "relatively individualistic writing and publication culture which prevails" in the arts and humanities (Cuthbert & Spark 2008: 79). In this, they are assisting in promoting a collaborative research environment, and are harnessing the skills of industry-based editors, referees and publishers to assist with theses completion. They are facilitating the active building of research profiles in discipline areas, driving a culture of research dissemination, and positioning their research degrees as part of an authentic lifelong learning process for candidates and supervisors.

However, in terms of challenges, the PhD by Publication also puts increasing demands on candidates, especially in preparing work not just to the commonly required "publication standard", but actually for publication. In relation to its form, the necessity of having to publish a series of separate items may direct and limit the resulting thesis. Writing to order for certain publications places specifications and conditions on the subject matter, content, narrative style and word length of pieces produced – which may direct, narrow, fragment and/or concentrate the candidate's ideas, the research carried out and their overall intellectual development. Requiring candidates to pursue publication outcomes throughout their candidatures, and perhaps before they may be ready to do so, may mean second-rate publications. The earliest publications might also be outdated before graduation and unhelpful in terms of career prospects where current knowledge is required. Moreover, the 'traditional' PhD thesis usually forms an integrated whole. At a commonly required length of some 80,000 to 100,000 words, the necessity to conceptualise, organise and complete such a major work is an achievement in itself, and is often cited as one of the generic transferable skills gained during doctoral study (see, for instance, EUA 2007: 5). If required, the conceptualisation of the whole of the PhD by Publication (as well as each piece of published work itself) may be as much, or more of a challenge, than that of one single work, but may not be understood as such in terms of achievement.

With increasing recognition that doctoral candidates do not know how to write for academic publication, and considerable input necessary to develop this specialised skill (Cuthbert & Spark 2008), additional work may fall to supervisors, who still have to provide the traditional project and research support. The PhD by Publication is, itself, as a degree in Australia, 'a work in progress' and this can promote insecurity and a sense of working on shifting ground for both candidates and their supervisors. Candidates may be allocated to supervisors and hosting departments/faculties that are inexperienced in the form and, therefore, unable to provide confident support and positive role models in the processes of conceptualising, planning, managing and completing their project.[12] Most academics have the 'traditional' PhD and/or Masters degree as their own qualifications (McWilliam et al 2002) and do not all have the necessary experience in publishing themselves to guide another through the processes of planning, researching, preparing and editing a publication, and then responding to referees comments. Such mismatches may have consequences as, although supervisors are not required to engage in significant career-focused work with their candidates[13], supervisors do influence their candidates' professional (and other) futures. Case studies attests that career role models possess the power to affect the choices of others both directly and indirectly (Pace 2008). This career modelling can have positive or negative effects, with

> individuals who have absorbed a model perceived to be a high performer in a specific career or occupational field are more likely to express a preference for entering that career or field that individuals who have observed a model they perceive to be a low performer (Scherer, Brodzinski & Wiebe 1991: 555, qtd in Pace 2008).

Furthermore, the PhD by Publication may not fit the yet-unknown future aspirations of a candidate as in, for instance, possible employment in (or by) institutions in countries that only recognise the 'traditional' PhD.

In the current research evaluation environment, supervisors may find enabling their students to achieve publication confronting – especially if those candidates begin to overtake them in the quantity and the quality of publication output. As these evaluation regimes are essentially competitive, supervisors may feel uncomfortable in assisting their students with contacting suitable publications, especially if this draws on (and even exhausts) their own hard-won networks in the publishing world. Transferring part of the work of the degree to publishers could stretch the resources of small, specialist, non- or under-funded publications to breaking point. Most experienced examiners will, necessarily, be unfamiliar with the form. This may make it difficult for supervisors to find willing examiners, or leave those examiners who do undertake such assessment unsure as to the expected form and standards. Broadening the range of research degrees available without adequately resourcing research into best practice policy frameworks and the professional development and support of staff involved, may spread the existing talent and other institutional assets too thinly, and diminish the quality (and the perception of the quality) of all higher degrees available in that university. Candidates, supervisors, institutions and disciplines may also face the perception that this is a qualification of a lesser standard than the 'traditional' PhD – a perception that, even if incorrect, can have significant, and ongoing, repercussions for all involved.

As publication equals revenue for universities, the PhD by Publication could provide an opportunity for the exploitative practice of "sweating your assets" which is, according to Redden, "squeezing as much value as possible out of your assets (including workers) while minimizing financial inputs" (Redden 2008). This would force doctoral study into a narrow economic model whereby its value is its ability to generate income. This could lead to higher degree places (and/or scholarships) being understood as investments capable of providing returns, and where the potential economic value of a candidate or a project as income might outweigh other elements such as its intellectual, community, cultural or aesthetic value. A related issue is the ownership the intellectual property (IP) in the publications generated in such a degree. Many refereed journals, for instance, require the transfer of the IP in that publication to be signed over to them. This potentially precludes other publication or dissemination (for example, in book form), without either the making of substantial changes, or the purchasing or otherwise negotiating the return of the IP to the author. Some doctoral scholarships, on the other hand, including a number of those funded by external, industry or university grants, require the IP in the project to assigned to the funding body. Viewing HDR study in this narrow economic manner introduces a range of questions with a range of implications. Will candidates' projects, publications and, therefore, their research topics be forced into areas that match institutional research evaluation concentrations – with their moving econometric goalposts, and no

evidence that such measurement encourages either innovation or work of lasting quality (Goldsworthy 2008)? Will supervisors have to meet the increasing administrative load necessary to assess before, monitor during, and report after the candidature in terms of how the work produced fits into these metrics? Will candidates and/or their supervisors receive a share of the income received for publications that meet publication funding guidelines? And, how will this be allocated if the candidate has already graduated?

Concluding comments

The diversity of doctoral level awards, and the variation in standards and expectations across universities (AVCC 2003; Neumann 2003), offers candidates, supervisors, higher education institutions and disciplines both opportunities and challenges in the current higher education environment. Students who have written about their impressions of the PhD by Publication have generally concluded that the advantages outweigh the disadvantages (Potts 2003; Caceres 2008; Draper 2008; Robins & Kanowski 2008; Starrs 2008), but none have yet considered their degree experience from a position of substantial hindsight or outside the frame of personal experience. Formal research into, and scholarship on, the degree is sketchy and, like the degree itself, in a nascent stage. This examination suggests that the PhD by Publication may match the skills, working processes and future aspirations of HDR candidates, supervisors, examiners and their hosting institutions in a range of discipline areas, including writing, but it may not. Properly framed in policy, resourced, staffed and managed, the PhD by Publication may provide an individually, disciplinary and institutionally viable alternative to the 'traditional' PhD for some research candidates, supervisors and hosting departments, but again, it may not. However, the further monitoring of policy frameworks, candidate and supervisor satisfaction, graduate outcomes and destinations, and the other elements discussed above will provide the rich data streams necessary for ongoing informed discussion across the discipline about this possibility.

Endnotes

1. The PhD by Publication should not to be confused with a higher tier of research doctorates than the PhD, awarded on the basis of a formally submitted portfolio of published research of a very high standard, such as the Doctor of Sciences (DSc/ScD) and Doctor of Letters (DLitt/LittD) degrees from the UK, Ireland and some Commonwealth countries, and other similar degrees awarded by some former Soviet Bloc satellites and Scandinavian countries.

2. The Professional Doctorate is of particular interest in, and to, the disciplines of education and nursing. For education, see Gale 2003; Maxwell 2003a, 2003b; McWilliam, Taylor, Thomson, Green, Maxwell, Wildy & Simmons 2002; and Taylor & Maxwell 2004; for nursing, see Boore 1996; Ellis

2005; Ellis and Lee 2005; Jolley 2007, Kirkman, Thompson, Watson & Stewart 2007; McKenna 2001, 2005; Redman 2007; Sergeant & Malone 2005; and Thompson & Watson 2001.

3. One element of research practice that has been neglected in the discussion around these degrees has been the relative demise of the research masters degree in Australia in the past decade. This is due to the doctoral qualification having become the degree demanded as the academy's entry qualification, sponsored by industry in cooperative research projects, and that confers proportionally more prestige and funding for the hosting discipline and university. Yet, despite this, candidates in writing do undertake – and successfully complete – a range of Master-level research, and coursework plus research, degrees (for example, MA, MCA, MLitt and MPhil) for professional, craft-related and personal reasons.

4. Although Australian supervisors are generally expected to devote an average of one hour per week to each full time HDR student, in the UK, candidates "typically … expect to see his or her supervisor only once a semester" (Jolley 2007: 232) and, in the USA, leading universities are only beginning to demand that "faculty advisers meet regularly with protégés" instead of the usual "semiannual review" (Berger 2007).

5. The Australian Qualifications Framework Doctoral degree accreditation requirements state that: "The Doctoral degree recognises a substantial original contribution to knowledge in the form of new knowledge or significant and original adaptation, application and interpretation of existing knowledge. This substantial and original contribution to knowledge may take the form of: a comprehensive and searching review of the literature; experimentation; creative work with exegesis; other systematic approaches; or advanced, searching and expansive critical reflection on professional theory and practice. A graduate of a Doctoral degree is also able to: carry out an original research project, or a project(s) addressing a matter of substance concerning practice in a professional at a high level of originality and quality; and present a substantial and well ordered dissertation, non-print thesis or portfolio, for submission to external examination against international standards" (AQF 2008).

6. Universities found offering a PhD by Publication in September 2008: Bond University; Charles Darwin University; Griffith University; Monash University; Queensland University of Technology; RMIT University; Swinburne University of Technology; University of Technology, Sydney; University of Western Sydney; and University of Woollongong.

7. This option slides uncomfortably close to the largely discredited Honorary Doctorate, which ranges from reputable universities' recognition of individuals' significant contributions to knowledge, culture and/or society to disreputable institutions offering such qualifications upon payment of a fee (Starrs 2008).

8. The difference between download-rate (and possible citation) versus reading is discussed below.

9. A large international survey found the majority of academics believe peer review is an "essential component of scholarly communication" (MWC et al 2008: 1).

10. The title commemorates Carolyn Farquhar Ulrich who, in 1932, when Head of Periodicals at the New York Public Library, began the *Periodicals Directory: A Classified Guide to a Selected List of Current Periodicals Foreign and Domestic*, which, having gone through several incarnations, has become the current directory. *Ulrich's* includes academic and scholarly journals, Open Access

publications, other peer-reviewed titles, popular magazines, newspapers, newsletters and zines, and is widely referred to in relation to the categorisation of publications for various purposes, for example, as to their peer-reviewed status.

11. OhioLINK is a consortium that services more than 500,000 students, academic and other staff at more than 80 institutions of higher learning in that USA state.

12. For further discussion of this in relation to the Professional Doctorate, see Green (2002).

13. The Australian Vice-Chancellors' Committee policy statement, *Universities and their Students: Principles for the Provision of Education by Australian Universities*, mentions the research postgraduate candidate's future only once, as the last of a supervisor's ten responsibilities, that of "providing career advice and assistance as appropriate" (2002: 21).

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