Addressing the curriculum problem in doctoral education

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How best to understand the curriculum problem in doctoral research education: that is the question that this paper engages. It begins by noting that curriculum as such is little referenced and inadequately theorised in higher education and certainly in doctoral education, and indeed has been described as a 'missing term'. The paper then reviews a now longstanding research programme in the latter field addressed specifically to research supervision, focusing on notions of pedagogy, textuality, subjectivity and knowledge. Over more than a decade and a half, a body of work has been produced in this regard, informed by literary and cultural studies, feminism and poststructuralist theory and philosophy, thereby opening up the field to new theoretical resources and perspectives. Following this, the paper goes on to draw more directly on contemporary curriculum thought and on what is called post-Reconceptualist curriculum inquiry to outline a curriculum-theoretical perspective on doctoral studies and research education, bringing together notions of representation, emergence, practice and futurity. It does so here with reference to both the PhD and the professional doctorate, but arguably has relevance for doctoral education more generally.

When Alison Lee and I put together the Australian Universities' Review Special Issue on 'Postgraduate Studies/ Postgraduate Pedagogy' in 1995, it was the formal inauguration of a collaborative research programme that we have now been working on for over 15 years. Of course that work has been rather more spasmodic and even opportunistic than we would have liked, for all sorts of reasons. Even so, a considerable record of publications in the area exists, and there have been presentations of various kinds in a range of forums - a substantive contribution, in terms of its principal focus on the assertion of supervision as pedagogy, that is, doctoral research supervision as a distinctive form of pedagogy. A key stepping-off point for the work was Connell's article a decade earlier in the then current manifestation of this very journal, entitled 'How to Supervise a PhD?' Connell (1985, p. 38) aptly described higher degree research supervision as 'the most advanced level of teaching in our education system', and further, as 'a genuinely complex teaching task'. In our 1995 Special Issue and subsequently, we have argued that understanding supervision as pedagogy is far from straightforward, or uncontroversial. Indeed, a deep-seated prejudice exists in the modern university, which systematically privileges research over teaching, disciplinarity over pedagogy (Lee & Green, 1997). In this regard, Connell's early intervention was and remains particularly important, because it put on the agenda a distinctively educational orientation, that is, a language and a perspective drawn specifically from the disciplinary discourse of educational research, as a significant form of inquiry in its own right. I see this paper as an opportunity to continue that work.

I've recently re-read Connell's article. It remains as arresting and engaging as ever, and as useful, even though times have certainly changed. The Australian university in the early 21st century is highly corporatised and strikingly performative in its orientation and conduct, and desperately underfunded. Even though teaching has been revalued, research has become more and more central to institutional identity, mission statements and the like, and a fraught matter of high status combined with ever-scarce opportunity. Relatedly, there has been a proliferation of doctorates over the period in question, here and elsewhere (Park, 2007). In research management terms, we are more likely to refer to doctoral education these days, accordingly, than to simply assume that higher degree work equals the PhD. Even so, old habits linger...

A crucial issue in higher education is the distinctive nature of its characteristic forms of curriculum, pedagogy and literacy. These can be considered in an integrated fashion, as an exemplary expression of what can be called the academic-dominant, a term I am adapting from Jameson's (1984) celebrated account of postmodernism as a 'cultural dominant'. This 'academic dominant' refers to the organised, hegemonic form of how the university operates in terms of, respectively, what to teach, how to teach, and which textual practices constitute appropriate and authorised forms of learning, study and research. Broadly, and all too briefly, the first engages the whole question of disciplinarity; the second involves what can be described as the time-honoured traditional practices of transmission and charisma (the 'lecture'); while the third privileges commentary and what has been called the '(print-)essayistic' mode - exposition, or the 'essay'. The focus in this paper is on the first of these - that is, curriculum. Properly speaking, however, they should be considered together, as I believe they are profoundly related. My particular concern here is what all this means for doctoral education.

A 'missing term'? On knowledge, curriculum, and doctoral education

A burgeoning field has emerged, addressed specifically to doctoral education, and to a reconceptualised view of research supervision, among much else. Something that is quite striking however is how little reference there is to curriculum, both as a distinctively educational phenomenon and as a field of scholarship in its own right. This is the case in higher education more generally, of course. Indeed, curriculum has been described as the 'missing term' in higher education reform discourse (Barnett & Coates, 2005). It has been asserted that '[c]urriculum is, or should be, one of the major terms in the language of higher education' (Barnett & Coates, 2005, p. 25), and its

absence has contributed to a history of disjointed and untheorised activity in higher education. There are signs, in fact, of a new interest in notions of 'curriculum renewal' and the like, although much of this is technically oriented, and quite narrow. Such work is, however, most commonly and characteristically addressed to undergraduate education; it hardly ever touches on postgraduate research studies, or more particularly doctoral education.

Re-reading Connell (1985), and vaguely recalling in it some sort of reference to curriculum, I was especially attuned to how it was being addressed. It was in fact much more limited than I had recalled, although suggestive all the same. Having described '[PhD supervision]' as 'a form of teaching', it went on to assert that '[1]ike other forms, it raises questions about curriculum, method, teacher/student interaction, and educational environment' (Connell, 1985, p. 38). Doctoral research is described as characteristically sui generis:

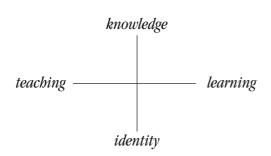
[O]ne of the problems of being a supervisor is that each [i.e. PhD project] has to be worked out separately. It seems as if one is always starting from scratch. And the students usually have little idea what is in store for them (Connell, 1985, p. 38-39).

That is, there is no set curriculum, no established course of study. Hence, as Connell (1985, p. 39) continues, '... there can be no formula for PhD supervision, no fixed course of events. The 'curriculum' cannot be planned in the way it is for undergraduate courses'. This is a particular way of talking and thinking about curriculum, as a 'course', something to be followed or to run, a 'track'. It is usually understood as a course of study, that is, a set sequence of engagements and experiences with ... knowledge, on the part of students, under the guidance of their teacher(s).

Two points are worth noting here. First, somewhere lurking behind the notion of 'course' is the Latin *currere*, which the North American curriculum theorist Bill Pinar (2004) has proposed as a central concept for curriculum scholarship. In Pinar's work, this is understood in part as pertaining to the experience of the course, that is, the student's experience, or that of whoever experiences the course in question, and this is often associated with autobiography. Second, the question of knowledge is foregrounded, or what is being studied. This is usually linked to what has been described as the key curriculum question What knowledge is of most worth? In conventional educational contexts, that in turn becomes, What should the schools teach? which is clearly inappropriate for doctoral education. Or is it? It is worth asking indeed what is it that doctoral education does - what is it for?

The answer is two-fold. On the one hand, it is about knowledge generation: producing (new) knowledge, as a result or outcome of systematic inquiry made public. It has in fact been widely noted, of late, how much of Australia's research output is associated with doctoral work. On the other hand, the emphasis is on research training, as it is still commonly described: producing researchers - particular kinds of personnel, or appropriately skilled, capable research subjects, docile and disciplined, productive bodies. This knowledge/identity coupling is indeed crucial to an informed view of curriculum, which might be succinctly defined as the pedagogic structuring of knowledge and identity. This means, in short, mapping knowledge and identity onto teaching and learning, as follows:

Figure 1



That is, curriculum can be understood as the field outlined here. One value of this formulation is that it brings pedagogy, or teaching for learning, within the ambit of curriculum, properly conceived. The larger point however is that knowledge is to be acknowledged as crucial in adequately thinking of curriculum. What kind of knowledge project is the doctorate, whether it be in the form of the PhD or any other higher research degree at this level? We are accustomed to seeing the PhD as constituting a distinctive form of knowledge work, indeed the highest and most prestigious in the university. This is partly where the traditional 'mystique' associated with the PhD, which Connell noted, surely comes from. There is something special about the knowledge produced in and by a PhD, or there should be. Something happens in the work of a PhD that is distinctive and significant, with regard to its knowledge project. Ideally, perhaps impossibly, something is changed in the world, and in the doctoral scholar him- or herself; s/he becomes, in effect, the Subject of Knowledge. Connell rightly seeks to play down the mystique. The point remains, however: an extraordinary promise is arguably at issue in doctoral work - the promise of *natality* (Arendt, 1958), itself related in important ways to the notion of futurity, becoming, and the New. Something similar is happening with other forms of doctoral education, although there is also an increasing secularisation to be observed, across the doctoral field more generally, which perhaps goes hand-in-hand with a new democratisation, a growing massification

But that immediately presents a problem, however. Firstly, to point to 'knowledge' as a focus for the professional doctorate in this fashion is immediately to run up against what has often been posed to date as its more appropriate and proper focus on 'practice'. A perhaps fatal binary comes into play, then: knowledge/practice. This links up programmatically with other formulations, with 'knowledge' seen as congruent with notions such as 'research', 'theory' and even 'scholarship' - all set up, equally problematically, against the only quite recently privileged category of 'practice'. Secondly, however, the problem we are confronted with is one of fundamental conceptualisation (or, perhaps more precisely, 'reconceptualisation'). How then is doctoral curriculum to be (re) conceptualised? Is it, as implied in our brief account of the academic-dominant, to be equated with knowledge, or (at its simplest) the 'what' of teaching? There is a long tradition in the fields of educational research and curriculum studies that does just that, especially that which is shaped and influenced by Anglo-American scholarship (Reid, 1999), although it is also a feature of Bernstein's (1971) account of educational knowledge. Or is curriculum also to be understood as the organised expression of teachinglearning experience, thus incorporating and generating particular understandings of knowledge, identity and textuality? Bringing these views all together is precisely what I aim to do here.

The professional doctorate has still only relatively recently emerged as an alternative form of doctoral study in Australian universities, not uncontroversially (Lee, Brennan & Green, 2009). To date, however, this phenomenon has been largely policy and market-driven, and consequently there is considerable range in terms of the quality both of educational provision and of academic-scholarly understanding as well as rigour. Further to this, its development and consolidation has been inseparable from mounting concerns about the PhD and about postgraduate research education more generally, and accordingly there continues to be widespread confusion and controversy in this regard. Much of this concern focuses on the role and status of the professional doctorate. What research there is, however, still tends to be more or less instrumental and/or bureaucratic in nature, although there are signs of growing sophistication, and hence the professional doctorate remains seriously under-theorised, in terms both of curriculum and pedagogy, research and teaching. Hence, in the long-term programme I have been engaged in, with Alison Lee, we have been principally concerned to explore various issues of research and theory, with a view to informing both policy and practice. This requires, among other things, a specific engagement - what I want to describe here as the curriculum problem - that is, I ask about how curriculum is to be conceptualised here in relation to doctoral research education. To begin with, however, it is appropriate to consider something of the history of doctoral study and the modern university.

Addressing the curriculum problem

In our 1995 introductory paper, we posited a distinction between 'professional' knowledge and 'disciplinary' knowledge. This distinction was made in specific relation to 'the appearance on the Australian scene of new kinds of doctoral research and accreditation', a development we suggested was 'fuelled and generated by, on the one hand, the emergence of different kinds of universities [...]', and on the other, what we described as 'an increasing secularisation of university work' (Lee & Green, 1995, p. 3). What we were referring to in the latter formulation was what we saw as 'the increased emphasis on professional studies of one kind or another, and what might be called the vocationalising of higher education' in Australia. Our reference to 'secularisation' was intended (albeit ironically) to set in train a binary play, with the key terms in opposition here being 'sacred' and 'secular' (or 'profane'...). In regard to this, we pointed to the implications of this 'seemingly inexorable push ... towards vocational education' for 'universities, traditionally oriented more towards knowledge and inquiry in its own right, as an end in itself' (Lee & Green, 1995, p. 3). In one sense, this was seen as a matter of the 'high' knowledge of the Academy set against the 'low' culture of the Popular - or rather, the sacredness of the 'inside' and the profanity of the 'outside'. Here, though, there was another difference-relation in effect, with the world of Study (or 'Learning') set against the world of Work. What was conceived as secular, then, in this instance, was the worldly realm of production, commerce and employment: at once the object and the very end of academic-scholarly endeavour and its more or less radical antithesis - the 'worldliness' of the one, that is, and the 'unworldliness' of the other. Later, specifically apropos the professional doctorate, we drew in work on the new production of knowledge, 'Mode 1/Mode 2', and the (potential) displacement of the University (Lee, Green

& Brennan, 2000), in continuing to explore such themes. Regarding the former concern, Barnett (2009, pp. 431-432) rightly observes that knowledge needs to be understood far more widely and flexibly than it usually is in such circumstances and debates.

Originally our reference was to distinctive 'disciplinary' and 'professional' orientations in the doctorate. At the time we were thinking of the PhD as more or less a 'disciplinary' doctorate, set against the (then) new professional doctorate, which seemed to involve a rather different knowledge project. That original formulation soon became recognisably inadequate, and misleading. After all, PhD work, at least potentially, can be interdisciplinary in nature, or multi-disciplinary, as much as anything else. Disciplinarity itself is a dynamic concept (Messer-Davidow, Shumway & Sylvan [eds], 1993). Somewhat ironically, Hodge's (1995) typically iconoclastic account of doctoral education, the new humanities, and what he called 'monstrous knowledge', had provided the basis for the distinction in question here. As he wrote, apropos of the 'PhD':

The single term refers to theses in all disciplines, including sciences as well as social sciences and humanities, proclaiming an abstract unity of all knowledge, 'sophia', which seemingly is loved equally in different ways by all people who receive their doctorate. Until recently in the Australian University system, that unity was carefully parcelled out into various 'disciplines', so that people graduated with a PhD in Sociology, History, etc., relatively autonomous fields or provinces in a single, hierarchically organised system of knowledges. This is the system of what can be called disciplinary doctorates (Hodge, 1995, p. 35).

His concern was with research and supervision in the context of interdisciplinarity and transdisciplinarity, where 'disciplinarity' itself becomes problematised. Further, his focus was on work in Cultural Studies and the New Humanities, as a specific manifestation of postmodernity in higher education. Such work remains typically highly theoretical and often abstract and 'difficult', and indeed some (e.g. Culler, 1983) have seen it as an emergent and distinctive '(anti-)discipline' in its own right ('Theory'). From the perspective of the traditional, modern(ist) university, however, organised as it is in terms of the meta-principle of disciplinarity, such work's productions are literally 'monstrous', outside the norm, and in recent decades accordingly there has been much debate and indeed conflict in higher education as a result. In this light, the professional doctorate might well similarly be seen as 'monstrous' or at least aberrant, and as a manifestation of danger and difference. But it is differently so, which is an important point, because these doctorates

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involve quite different and distinctive intellectual and textual undertakings. Nonetheless, there is something in the new knowledge projects associated with such doctoral work, across the range, that makes them seem often counter-normative, or perhaps simply unintelligible, or at least 'eccentric'

Elsewhere (Lee & Green, 1997) we sought to describe the complex, contradictory relationship between pedagogy and disciplinarity in the (post)modern university. Up until quite recently, what seemed the unassailable norm in university research and advanced graduate education was the disciplinary structure of knowledge (re)production. Yet, as we argued, that needed to be re-assessed bistorically, and understood therefore as arising out of quite specific and delimited historical conditions and configurations. At issue, accordingly, was the need to re-think 'a set

of taken-for-granted assumptions concerning the relations between disciplinarity and pedagogy' in the university, and more specifically 'the primacy of the former over the latter and the relegation of pedagogy - matters of teaching and learning, and education more broadly - to

the margins' (Lee & Green, 1997, p. 3). Our particular concern, following important work by Hoskins (1993), was to draw attention to 'the historical nexus of modernity and disciplinarity' (Lee & Green, 1997, p. 9), and to assert and affirm the significance of educational practice in this regard. More recently we returned to such historical inquiry with specific regard this time to doctoral supervision and the research university (Lee & Green, 2009).

However, having emphasised pedagogy over disciplinarity in this previous work, it would now seem appropriate and timely to shift the focus back, as it were. This means addressing more specifically and explicitly what I am calling here the curriculum problem. As Gilbert (2009, p. 56) has put it, 'there is value in considering doctoral training as a matter of curriculum as well as pedagogy'. This is particularly important if, as seems to be the case, more explicit account needs to be made of what has been described as the knowledge question, in seeking to address doctoral curriculum. As Gilbert observed, '... studies of supervision and pedagogy have not directly addressed what might be called the doctoral curriculum - what it is that students learn in their courses of study, as distinct from how they learn or issues of programme delivery' (Gilbert, 2009, p. 56). He was working with a particular view of curriculum, it must be said, as indicated in the following: 'Viewing the doctorate as curriculum directs attention to the forms of knowledge in which it is grounded, and how these are articulated in the documentation of the degree' (Gilbert, 2009, p. 54; my added emphasis). That is, this is a view oriented more to the material or 'written' curriculum, Moreover, the focus of his account, as he made clear, was on the so-called 'intended curriculum' (Gilbert, 2009, p. 59). The link between knowledge and curriculum has been noted elsewhere, with specific reference to higher education (e.g. Barnett, Parry & Coate, 2001/2004). How best to understand the knowledge project of doctoral education is precisely what I mean by the curriculum problem.

I have discussed elsewhere how curriculum is to be (re)conceptualised with reference to notions of representation, conceived within a poststructuralist frame (Green,

> 2010). It is at this point, then, expressly from the point of

view of curriculum theory. that questions can be asked and advanced graduate education was the about the forms of selection and abstraction, and also production. Yet, as we argued, that needed the processes of de- and recontextualisation, that are involved in doctoral work. An important early account

in this regard, Lundgren (1983, 1991) proposed that the curriculum problem par excellence was what he called 'the representation problem'. As he wrote, curriculum becomes problematic 'when production processes and reproduction processes are divided from each other':

The moment production processes are separated from reproduction processes, the representation problem arises, that is the problem of how to represent production processes so that they can be reproduced. The representation problem is the object for educational discourse, and is the eternal problem of pedagogy as a field of study (Lundgren, 1983, p. 11).

(I pass over, here, the reference in this instance to 'pedagogy', save simply to note that he is using the term in its European sense.) What needs to be identified and isolated in the formulation above is precisely the problematic of representation. As various commentators such as Lundgren (1991, p. 293) and Hindess (1995) observe, representation is in fact foundational with regard to disciplinarity, social theory and the modern university. In Hindess's (1995, p. 42) terms:

[O]nce a 'relationship to truth' (or whatever) is seen as involving more than an isolated individual (and perhaps even then), it will be caught up in the problem of representation: what is known has also to be shown to others, and it must therefore be represented, in speech, writing, or other kinds of sign, or in some appropriate reaction on the part of those who perceive it.

That is to say, representation becomes an issue when the full force of the social is recognised. Moreover:

[R]epresentation, of whatever kind, can always be seen as, on the one hand, capturing (or at least as representing) the essentials of what is to be represented and, on the other hand, as artifice. Representation, however successful it appears to be in part, is always misrepresentation (Hindess, 1995, p. 42).

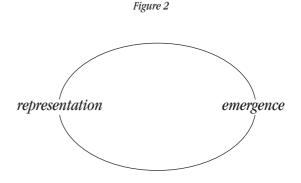
Hence, for Lundgren and others working in this tradition (e.g. Kemmis, 1993), curriculum transformations of knowledge and identity are always problematic, precisely because they must introduce due and unavoidable consideration of matters of textuality, rhetoric and representation - the Symbolic. As such, I have argued that theoretical work of this kind is transitional with regard to what has been called the 'modernism-postmodernism' debate, and that, further, curriculum theory in this regard needs to take more explicit account of poststructuralist theory and philosophy, particularly concerning what has been identified here as a key organising relationship between curriculum and representation. What this enables, in turn, is a better understanding of matters such as hybridity and undecidability. To my way of thinking, such concepts are necessary concepts in developing a richer, more adequate account of the specific curriculum issues and challenges associated with contemporary doctoral education, both generally and with specific regard to the professional doctorate as it has been developed in Australia. At the same time, I argue that this argument serves usefully to problematise doctoral research education more generally, and hence also the institution of the PhD, and thereby contribute to their ongoing critique and renewal.

What kind of knowledge work is at issue in doctoral education? How is research to be understood in this context? How is knowledge work structured pedagogically, or educationally? How does one learn to engage in knowledge work, in the very course of doing so? What kinds of (subject-)formation are involved? These are just some of the questions that arise. Among matters still needing to be explored are: the relationships between 'subjects' and 'objects' of research and knowledge - the latter touched on elsewhere (Green, 2009a) - and between 'knowledge objects' and 'epistemic practices' (Knorr-Cetina, 2001), which are usefully addressed with reference to recent work in practice theory and philosophy, appropriately supplemented. All this remains still to be fully worked out.

Representation, emergence and (the) doctoral curriculum

Here, however, I want to present what may be a far too schematic account, a sketch perhaps, of a potential curriculum-theoretical framework for doctoral research education. I have already suggested that a reconceptualised concept of representation is a key feature of such a formulation. How this view of curriculum and representation is to be understood has been laid out elsewhere, introducing notions of 'impossibility' and 'in(ter)vention' (Green, 2010). Briefly, I have argued that rethinking representation as itself a form of practice, as at once 'invention and 'intervention', is useful in that it allows a properly (material-)semiotic view of curriculum. That argument involved an engagement not only with deconstruction, and poststructuralism more generally, but also with complexity theory.

On the one hand, this means asking what gets represented in and through (the) curriculum - what gets included, and thus made available for pedagogy and study - bearing in mind always the thesis of the impossibility of representation. On the other hand, a crucial consideration becomes the concept of emergence, a fundamental category in the discourse of complexity (Osberg, Biesta & Cilliers, 2008). Of particular interest is the notion of an 'emergentist' curriculum, or an 'emergentist' view of curriculum (Osberg & Biesta, 2008). Curriculum is posited as 'a space of emergence' (Osberg & Biesta, 2008, p. 324). While this is contrasted with a 'representationalist' perspective, I argue that a reconceptualised, post-critical view of representation remains productive, and powerfully so. (That is, a distinction is to be posited between 'representationalism' and 'representation' per se.) Indeed, representation and emergence might consequently be seen as integral, reciprocating aspects of a reconceptualised view of curriculum (Figure 2).



This formulation has particular implications, it seems to me, for doctoral research education. It is to be differently understood with regard to different forms of doctoral work - the PhD, for instance, and the professional doctorate, or any of the other doctoral forms now appearing on the scene (Park, 2007). Each, however, involves a particular and distinctive kind of knowledge work, a research project, conceived both in terms of candidature, or apprenticeship into an epistemic community, and as productive in its own right, as a formalised and authoritative contribution to knowledge. Here I will focus on the PhD and the professional doctorate.

As Connell (1985) noted, the PhD characteristically and certainly traditionally seems to operate without (a) curriculum. Indeed, it may be difficult even to think of it in curriculum terms. There is clearly no established pathway, no course of 'instruction' or 'study'. Rather, each work in this regard unfolds within a more or less loosely defined space. Connell (1985) evoked the notion of a 'dialectic' in what was identified as a 'creative research project', observing that this dialectic ('an argument between the general conception and particular investigations, a backand-forth between data and theory, and between formulation and critique') had 'to follow its own logic. If we knew its course in advance, the research would not be worth doing. A good research project opens up new questions as much as it answers questions already posed' (Connell, 1985, p. 39). That is, doctoral work has a crucial aspect of 'discovery' about it, an orientation to and indeed an investment in the 'new' - it is always-already emergent.

Nonetheless, Connell suggests, there are 'moments' one can discern, or look for, various characteristic 'tasks', a certain 'rhythm' - a temporality. The project unfolds, the dissertation builds, knowledge emerges. It is only retrospectively, in real terms, that one can trace the journey that has been made, much like the explorer narratives that Paul Carter (1992) sees as exemplifying what he calls spatial history. This is curriculum, but thought differently. What is foregrounded, lived through, is the passage (Green, 2009b). Meaning emerges, in the writing, in the pedagogic exchanges of supervision, and elsewhere and when something new is produced, something different, distinctive. One does not know, cannot know, what will happen, only that something will happen' (Osberg & Biesta, 2008, p. 325; my added emphasis). Importantly, this 'space of emergence' pertains to both knowledge and subjectivity - the object of research and the researcher as subject. Regarding this 'object', an exemplary 'knowledge object', as Knorr-Cetina's (2001) describes it, she writes: 'Objects of knowledge are characteristically open, question-generating and complex. They are processes and projections rather than definitive things' (Knorr-Cetina, 2001, p. 181). They are unfinished, partial, imaginary ('an imagined object'), future-oriented, virtual. 'From a theoretical point of view, the defining characteristic of an epistemic object is this changing, unfolding character - or its lack of 'objectivity' and completeness of being, and its non-identity with itself' (Knorr-Cetina, 2001, p. 182).

In the case of the professional doctorate, the aim from the outset was precisely to provide more structure, more guidance. If the PhD tended to be constituted as intense work in isolation, over a long stretch of time, an extended duration, the professional doctorate ideally would be at least initially more communal, undertaken in the company of like others, with more articulated and explicit forms of induction and preparation, and less abrupt sink-or-swim liminality. Moreover, the professional doctorate tended to realise this process in the form of a more explicit, tangible curriculum. It was typically organised in the form of a staged course structure, including preliminary coursework, with the 'project' delayed, and often prescribed in some fashion (e.g. 'three small-scale studies plus an exegesis'). The curriculum seemed clearer, as such. (There are of course moves currently underway towards a more structured programme for the PhD.)

In this way, and expressly from a curriculum-theoretical point of view, it becomes immediately pertinent to think of it in terms of the representation problem (Green, 2010). If professional practice is at the very heart of the professional doctorate, as an advanced research degree, bow is it to be represented? How to bring it, in all its complexity and mystery, within a curriculum, a structure of knowledge, identity and pedagogy? What to include, for instance? What is possible to take account of, to seek to draw in, to (re)contextualise? What cannot be represented? What must be left out, omitted, jettisoned? What happens when this becomes that, when it is moved from here to there, and inescapably transformed in its passage? Much work is now available theorising and researching (professional) practice as such. The practice turn in contemporary theory is well documented (Schatzki, Knorr-Cetina & Savigny (eds), 2001; Green (eds), 2009). The representation problem is the curriculum problem par excellence. The task and the challenge of attending to the curriculum problem is, therefore, particularly pertinent to something like the professional doctorate.

However, the point is that this kind of argument can be seen as applying to the PhD as well, and that, conversely, the notion of an emergent curriculum may not be at all inappropriate for the professional doctorate. There is a crucial sense in which a PhD has long been understood as a dialogue with disciplinarity, or at least with a particular discipline or disciplinary complex. It has been well documented how the PhD emerged out of the history of the modern research university, the history of disciplinarity, as the degree of preference, and the one with the highest status, the greatest prestige, even as it became the key marker of academicity, of licensed academic identity. The recent work of the Carnegie Foundation in the United States has introduced the notion of 'stewardship' into the debate (Golde & Walker (eds), 2006), arguing that the award of a PhD brings with it a responsibility to operate henceforth as a 'steward' for the discipline, a 'custodian' - a designated, delegated representative. The same might be said for the professional doctorate. Indeed, this seems to be built into its very concept, given that it is often marketed as being for established, experienced practitioners, who might see it as providing a scholarly basis for professional leadership. This is surely a matter of stewardship for the profession, and for the field at large.

At the same time, the hallmark of genuine research, genuine inquiry, whether it be in the context of the PhD or that of the professional doctorate, is that it results in the production of new knowledge. Something emerges, something different, new, which is more than the sum of the elements making up the total process and the various aspects of doctoral study. This is in line with Osberg and Biesta's (2008, p. 315) view of what they describe as 'a strict interpretation of emergence' - that is, 'what emerges is more than the sum of its parts and therefore not predictable from the 'ground' it emerges from'. Here it is appropriate to evoke Grosz's (1999a, 1999b) sense of futurity, of the production of the New, 'the endless unfolding of the new' (p. 5), and 'the joyous open-endedness of the future' (pp. 21-22). She is concerned too with notions of emergence, time and becoming, and with Deleuzian concepts of difference and actualisation, all of which seem at least consistent with the discussion earlier, drawing from Knorr-Cetina and others, about research and knowledge as unfolding and emergent. In this way, it is always structured by desire, open-ended, future-oriented, and ontologically, radically virtual.

In closing, then, I want to reiterate that these are curriculum issues and insights, and fundamentally so. Curriculum inquiry is, as Pinar (2004, p. 2) writes, 'the interdisciplinary study of educational experience' - for him, informed significantly by the arts and humanities, theory and philosophy. This is, above all, educational expe-

rience profoundly invested in and organised by the nature and pursuit of knowledge. In the case of doctoral research studies, this includes, at a minimum, what is involved in 'becoming-researcher', or what it means to become, as it were, the putative Subject of Knowledge, to say nothing for the moment about knowledge per se. If doctoral education does indeed have its own distinctive curriculum problem, along the lines outlined here, then much remains open to investigation if we are to understand what it really means to engage in doctoral work, in both its practice and its pedagogy.

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