

Rethorizing doctoral supervision as professional work

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A competitive higher education environment marked by increased accountability and quality assurance measures for doctoral study, including the structured training of doctoral supervisors, has highlighted the need to clearly articulate and delineate the work of supervising doctoral students. This article responds to this imperative by examining the question: in the contemporary university, what do doctoral supervisors *do* and how might their work be theorized? The response draws on life history interviews with doctoral supervisors in five broad disciplines/fields, working in a large metropolitan university in Australia. Based on empirical analyses, doctoral supervision is theorized as *professional work* that comprises five facets: the learning alliance, habits of mind, scholarly expertise, *techné* and contextual expertise. The article proposes that this model offers a more precise discourse, language and theory for understanding and preparing for the work of doctoral supervision in the contemporary university.

Keywords: doctoral advising; research supervision; professional work; theoretical framework; research training

Introduction

The transformation of the higher education landscape has triggered structural changes, new funding regimes, and stricter accountability and quality assurance requirements that have changed the nature of doctoral education and the work of doctoral supervisors, or advisers as they are known in some countries (Altbach 2004; Brooks and Heiland 2007; Chambaz 2008; Cribb and Gewirtz 2006; Deem 2006; Halse 2007; Halse and Gearside 2005; Lucas 2006; Pearson 2005). Our article addresses a dilemma that continues to challenge higher education in this complex, changing environment: how to describe and theorize the complex, multifaceted work involved in supervising doctoral students. Our article builds on, but also seeks to extend, the valuable research that has highlighted differences in the doctorate across supervisors, disciplines, programs and nations (e.g. Golde and Walker 2006; Sadlak 2004) by focusing explicitly on the pedagogical and conceptual commonalities *across* these different areas.

Doctoral supervisors play a critical role in doctoral education, and 'good' doctoral supervision is crucial to successful research education programs (Golde 2000; Harman 2002; Seagram, Gould, and Pike 1998; Walker et al. 2008). Research underlines the links between the quality of doctoral supervision and student progression and attrition rates (Ives and Rowley 2005; Organization for Economic Cooperation and Development 1987; Sadlak 2004), and completion rates have reputational and financial implications for universities in an increasingly competitive higher education

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marketplace. As a consequence, the work of doctoral supervisors has emerged as an international issue of concern in higher education. In the USA, for instance, the ‘Carnegie Initiative on the Doctorate’ (2001–5), led by the Carnegie Foundation for the Advancement of Teaching, identified supervisors as pivotal to any effort to improve doctoral education (Golde and Walker 2006; Walker et al. 2008). As part of Europe’s Bologna Process, the ‘crucial role of supervision’ was recognized in a ministerial agreement on the ‘Ten Salzburg Principles on the Doctorate’, and, at the inaugural meeting of the European University Association Council for Doctoral Education (European University Association 2008), one of the five themes for doctoral training in Europe was identified as ‘improving the supervision of PhD candidates, particularly through better training and monitoring of supervisors’. In Australia, the social, political and economic changes to universities since the massification of higher education at the end of the 1960s have diversified the profile of doctoral students and programs, increased ‘regulation of supervisory practices’ (Pearson, Evans, and Macauley 2008), and altered the role and responsibilities of supervisors (Green and Usher 2003; Neumann 2007).

The doctoral supervisors in our interview study, discussed below, testified to the changes in their work. They described doctoral supervision between the 1970s and 1990s as an intellectual and social enterprise, where personal boundaries were sometimes blurred but the roles of supervisors and students were clear: the supervisor provided oversight and guidance; the doctoral student was responsible for producing a seminal thesis that would secure his or her place as an authority in their field. Such representations may reflect the sort of romantic yearning for an imagined golden past that Tierney (2003) cautions against. Nevertheless, *all* supervisors in our study conceptualized their *current* work with doctoral students as significantly different from their former experiences. They spoke of actively fashioning students’ development to address deficits in expertise; deliberately intervening to ensure timely completion; purposeful provision of tutoring or research assistance work to minimize the risk of financial distress and withdrawal; and the deployment of personal networks to facilitate completion and ensure post-graduation employment. In this new environment, supervisors also reported carefully managing their interactions with students, and drawing clear boundaries between their professional work as doctoral supervisors and their personal interaction with students.

The changed nature of universities and the apparent shift in doctoral supervision practices has intensified the imperative to clarify the nature and scope of the work of contemporary doctoral supervision (Pearson 2005). The pedagogy of doctoral supervision has been described as poorly articulated and under-theorized (Bartlett and Mercer 2001; Delamont, Parry, and Atkinson 1998; Green and Lee 1995), and, by others, represented as a sort of secret business:

The actual practices of postgraduate pedagogy have been, traditionally, somewhat mysterious and intimate phenomena, particularly within the arts, humanities and social sciences ... Traditionally conducted behind closed doors in spaces remote from either undergraduate teaching or the ‘real world’ of commerce and industry, the process of academic over-stimulations and scholastic seductions has remained relatively unexamined. (McWilliam 2002, 107)

Scholars have sought to address this state of affairs by proposing models of supervision (e.g. Vilkinas 2007), or frameworks based on conceptions of research (Lee 2008) or developed for the purpose of reflective practice (Pearson and Kayrooz 2004).

Others have pointed to the evolution of new supervisory practices, including collaborative knowledge-sharing activities such as supervisory panels, group supervision and peer groups (Allen, Smyth, and Wahlstrom 2002; Malfroy 2005). Such scholarship has generated a field of research that is rich in detail about particular disciplines, perspectives or contexts. Nevertheless, Boud and Lee (2005) point out that there remains:

a lack of strong public discourse of pedagogy for research education, particularly one that accounts for the growing size, complexity and pressure for change experienced by the higher education sector in recent times. (502)

Our article takes up this challenge. Based on empirical data from two complementary studies interviewing supervisors about their work, it pursues our aim of stimulating the development of a theory and language to describe doctoral supervision in the contemporary university. In broad terms, the institutional organization of doctoral supervision is often shaped by historical arrangements or idealized perceptions held by university administrators, policy makers and governments of what doctoral supervisors *should* do. This state of affairs is prone to glossing over the perspectives and practical, day-to-day realities of supervising doctoral students. Our article seeks to redress this imbalance while also responding to the invocation for a theory of doctoral supervision that accommodates variations in doctoral programs across disciplines, institutions and countries, and the different epistemological, pedagogical and management issues that are part of a high quality research learning environment (Pearson and Brew 2002). Our article has also been shaped by pragmatic factors: that is, our professional responsibilities for research development in a large, metropolitan university, and our need for substantive knowledge about what doctoral supervision *actually* involves, in order to: provide effective training for doctoral supervisors; determine workloads for doctoral supervisors; improve the quality of doctoral education; and enhance the doctoral experience of our students.

Method

Our analysis draws on two complementary studies that examined the impact of the doctorate on students, supervisors and external stakeholders. Across the two studies, extended, life-history interviews were conducted with a total of 26 supervisors working in a large comprehensive, metropolitan university in Australia. The sample was typical of supervisors in terms of age, gender, qualifications and supervision experience in other universities in Australia and comparable overseas countries (Pearson, Evans, and Macauley 2008).

Three criteria were used to identify supervisors: (i) they were currently supervising doctoral students; (ii) they had a reputation as a 'good supervisor' amongst students, academic colleagues and doctoral program administrators; and (iii) they were working in one of the five faculties within the university. Supervisors were drawn from the following disciplines/fields: business and management, humanities and social sciences, psychology, education, and science and health. An equal number of male and female supervisors participated in the study. All were senior academics (senior lecturer or higher) with the majority being professors; all were awarded their doctoral degree 10–30 or more years ago, with the majority towards the upper end of this time span. Participants ranged from relatively inexperienced in doctoral supervision (i.e.

three or fewer doctoral completions) to very experienced (i.e. 10 or more doctoral completions), with experience levels slightly lower in business and management than other fields.

Semi-structured, individual life-history interviews were conducted with each supervisor. The interview schedule addressed key substantive and theoretical issues of interest by focusing on participants' historical and current experiences of supervising, but provided scope for supervisors to talk about the issues and aspects of their experiences that they considered most important. Thus, the recursive model of interviewing (Minichiello et al. 1990) was used so that the interviews were reflexive and proceeded along the lines of a conversation. Although interviews can be somewhat performative (Denzin 2001), this method was deliberately chosen to elicit supervisors' personal reflections and finely grained insights into their supervising practices over time. Interviews were between one and two hours long, were audio-recorded, and then transcribed and analyzed using grounded theory and constant comparative methods (Glaser and Strauss 1967). Both authors and a research assistant undertook parallel coding to ensure consistency in interpretation of the transcribed text.

Generating theory

In accordance with grounded theory, the theoretical codes that emerged from the open coding and memos were used to theorize emergent ideas about each code and its relationships. Early in the analytical process, we were struck by supervisors' repeated use of the word 'professional' to describe their responsibilities and relationships with students, as the following comment illustrates:

I think it's just easier to keep it professional and it's cleaner as well. I'm not here to be friends. I'm here to make sure you get your PhD ... with some I'm more friendly and socialize sometimes. You know that's all fine, but I do think that my first responsibility is to be a supervisor in a professional way. (Humanities – female professor)

A profession is a group of individuals with specialized knowledge and skills in a recognized body of learning derived from research, education and training at a high level, whose members use their knowledge and skills in the interests of others and, in doing so, exercise ethical and intellectual discretion, judgment and personal responsibility (Australian Council of Professions 2004). While doctoral supervision has long been recognized as one of the most complex aspects of academic teaching (Connell 1985), supervisors' frequent reference to their work as 'professional' marks a shift in the discourse of doctoral supervising, and establishes a new set of 'values, practices and behaviours [and] ways of thinking about the world' (Halse, Honey, and Boughtwood 2007, 222).

The use of the word 'professional' to describe the tasks and responsibilities involved in doctoral supervision signals a substantive reconceptualization of supervision. There is a long tradition of describing teaching as professional practice (e.g. Epstein and Hundert 2002; Kemmis 2005; Noddings 2003; Schatzki 1996; Schon 1983; Wenger 1998). However, representing doctoral supervision as merely another variation on 'professional practice' understates the complexity of doctoral supervising and, as Kemmis (2008) cautions, the phrase professional practice is so widely used that the nuances of its meaning are rarely understood even by practitioners.

A more appropriate phrase for describing doctoral supervision is 'professional work'. Arendt (1958) attributes a special, productive identity to work by drawing a

distinction between ‘work’ as a fruitful, creative activity that produces long-lasting objects and effects, and ‘labour’ as the physical exertion demanded by the unrelenting need to produce items needed to live. For Arendt, work is the prerequisite for the possibility of action – the unique and visible acts that produce change and constitute the realm of great deeds and words. It is the action that results from work, Arendt argues, that makes us fully human and without which life ceases to be a *human* life.

Extrapolating from Arendt’s argument, doctoral supervision has enduring effects because it produces research and doctoral graduates who carry within themselves the potential for future social and political action. Given our supervisors’ invoking of a discourse of professionalism, our analysis of the interview data was guided by the question: can doctoral supervision be theorized and described as a particular form of professional work?

Using grounded theory to explore this question, our analysis of the data generated five *facets* or categories in the work of doctoral supervision. We use the word ‘facet’ deliberately. As in crystallography, the organization of facets constructs the external shape and the internal patterns of an object, yet any facet only *exists* as a result of its relationship to other facets. Similarly, the facets of doctoral supervision are both inter-related *and* combine to construct the totality of doctoral supervision. The labels we assigned to each facet were designed to capture the substantive and theoretical features of the data in that category: the learning alliance, habits of mind, scholarly expertise, *techné* and contextual expertise.

Our selection of labels to describe the five facets of doctoral supervision was influenced by the parallels we observed between supervisors’ accounts of their work and the intellectual virtues described by Aristotle in *Nicomachean ethics* (1999). In making use of Aristotle, we build on an established tradition of Aristotelian influence on pedagogy, educational practice and work across several disciplines, including education, the social sciences, medicine and health (e.g. Carr 1987; Epstein and Hundert 2002; Kemmis 2005). In the following discussion, we describe the defining features of each facet and then illustrate how each facet emerged from the data analysis.

The learning alliance

A key professional role for supervisors was the development of what we call the ‘learning alliance’. The learning alliance is the agreement between supervisor and student to work on a common goal, namely the production of a high quality doctorate. The learning alliance is a contract between the supervisor and student, and is akin to the collaborative ‘therapeutic alliance’ between a patient and clinician to work together to diagnose the illness, pursue a therapy and achieve recovery. Our concept of the learning alliance builds on the ethics of care developed by Gilligan (1977), which views individuals as embedded, embodied and interdependent subjects who have a moral responsibility to protect and promote the specific interests of others. Like an ethics of care, the learning alliance is ‘based on responsibility and relationships rather than rights and rules; is grounded in concrete circumstances rather than abstractions, and is expressed as an “activity of care” rather than as a set of principles’ (Halse and Honey 2005, 2158).

Supervisors in our study identified the key features of a professional learning alliance as mutual respect between student and supervisor, flexibility in accommodating each others’ personal and professional circumstances, a firm commitment to collaborate

on the attainment of a doctorate, clear communication, and explicit strategies for progressing towards their common goal. For supervisors, a productive learning alliance required effective written and verbal communication, the ability to teach, collaborate and work in a team, particularly when involved in joint research projects or advisory committees, and flexibility and responsiveness:

I adjust to meet the needs of the students. They're all individual. They do different projects. They all have specific needs, and I adjust my supervision to accommodate that. (Education – female professor)

For the majority of supervisors, the learning alliance was based on a shared engagement in research and scholarship. One supervisor illustrated this point by describing his use of discussion to establish rapport and a non-threatening environment to support students' intellectual development:

I like to work together with a student around particular readings, so if they're reading something new I'd like to read it with them and kind of engage with them, unpack the argument, see how they're thinking, what they're doing ... the conceptual categories that they're using ... we'll have a discussion which is kind of a debate more than an argument so that the student in a sense can ... confidently ask to clarify their ideas, how they're going to use them. (Humanities – male professor)

Supervisors described the importance of a personable relationship with students as central to the learning alliance, as the following interview extracts illustrate:

My relationship with my students is one based on mutual respect, rapport, genuine warmth ... I also like to make sure that my students and I interact with a sense of humour. (Psychology – female professor)

Supervisors also emphasized that the learning alliance is not an equal or democratic relationship. Ultimately it is the supervisor who is responsible for recognizing and responding to the needs of different students, drawing them into the learning alliance, and reminding them of their obligations under that alliance, when necessary:

I knew that they weren't reading and retaining the information and working on it every day ... you can't just be disappointed about it ... we say to our students, 'We expect you to be in the lab. It's a lab-based discipline and we expect you to be here. We expect you to be attending seminars'. (Psychology – female professor)

The boundary does need to be clear so that the student is always taking responsibility for their own learning [and] it really is important and from the supervisor's point of view because some students can be extremely demanding ... the supervisor has to know when to say it's over to you, you have to do this work. I can introduce you to these people, I can write the letters on your behalf but I can't hold your hand to show you how to use the archives, and I can't spend my time writing prose for you. You have to take that responsibility. (Humanities – female professor)

Despite stressing the importance of the learning alliance, all supervisors reported that the intensification of institutional pressures on academics to perform at increasingly high levels in both teaching and research had prompted supervisors to be more disciplined and structured about how they managed their time and interaction with students. There are similar pressures on academics in other institutions in Australia and elsewhere in the world (Lee 2008; Sadlak 2004; Tierney 2003; Walker et al.

2008). The response of supervisors in our study was to carefully control the length and focus of meetings, set clear milestones and deliverables, and draw firm boundaries around their relationships with students:

I meet with my students once a week, religiously. We meet for approximately an hour a week and have a task list that we complete every week and we tick that off every week or so until I start to see the student taking on responsibility. (Psychology – male professor)

You care for and support and keep your distance ... for me it is a continual contradiction between caring for students while keeping this sort of distance. (Humanities – male professor)

Habits of mind

In doctoral supervision, ‘habits of mind’ is both a disposition and mode of behaviour. It involves the capacity to learn and reflect on the principles for making particular decisions, and to exercise the judgment and disposition to apply these principles in unfamiliar or unforeseen situations in ethically appropriate ways. Habits of mind both enable and are necessary for building the learning alliance because they involve being interested in students and their work; responsive to students’ needs; able to make balanced judgements about the quality of students’ work; able to provide critical yet constructive feedback and advice; and able to learn from these experiences and apply this learning in different situations with different students.

The concept of habits of mind is widely used to describe a key professional competence in fields such as psychology, education and medicine. It is habits of mind that allow the practitioner to be attentive, curious, self-aware and willing to recognize and correct errors (Epstein 1999; Epstein and Hundert 2002). The antecedent of habits of mind is Aristotle’s intellectual virtue of *phronesis*, or practical intelligence and wisdom. In other words, ‘right reasoning about what is to be done’ (Aquinas 1966), and ‘knowing how to apply general principles in particular situations’ (MacIntyre 1966). Simply put, *phronesis* is the lived knowledge that enables individuals to exercise deliberative reasoning to make considered judgments about how to act in particular situations to bring about positive change (Carr 2007). *Phronesis*, therefore, is the intellectual, social and contextual knowledge that links the general and the particular through actions and analysis. As with habits of mind, *phronesis* not only involves the ability to decide how to achieve a certain end, but the capacity to reflect upon and determine that end (Dunne 1993). This latter aspect is akin to the familiar concept of reflective practice in education and the social sciences. Rolfe (1997), for example, describes reflective practice as a form of critical literacy that involves mindful practice and informal theory building during which the practitioner is both the subject and object of scrutiny, critique and the reform of practice.

Although the operation of habits of mind in doctoral supervising is difficult to capture succinctly, the following interview extracts communicate something of its nature:

If a student starts saying ‘I don’t know what my thesis is about. I’m losing it. It’s coming apart’, then I see it as my job to not simply make supportive noises but just say, ‘I think your thesis is valuable because you’re doing this and this and this and this’. Students in that position always seem to need that – that external gaze that can see more in their thesis at that moment than they can when they’re oscillating between everything and nothing. (Humanities – male professor)

This interview extract shows how exercising habits of mind involves the supervisor in reflecting on the learning and understanding acquired through their personal and professional experience, and using this expertise to help move a student into a more productive mode of engagement with their work. In a similar vein, the extract below illustrates how habits of mind involve developing the ‘lived knowledge’ gained through life experience into broader, generalized principles that can be drawn upon to address specific issues with different students.

I’ve learnt in the job. Looking back I don’t think I was a particularly good supervisor to start with, [now] I’m good at understanding that it is an intellectual process and a process of establishing emotional containment. So when someone’s life appears to be falling apart ... and it’s affecting their work, then they need to feel that they’re able to talk and not be judged. Then, within that, they’re more open to receiving critical feedback about their work in a way that they know that it’s coming from a person that has their best interests at heart. (Social sciences – male professor)

Scholarly expertise

What we call ‘scholarly expertise’ is central to the work of doctoral supervision. In part, scholarly expertise is akin to Aristotle’s notion of *episteme*, which is commonly translated as theoretical knowledge acquired through reflection and thinking (Aristotle 1999; Flyvbjerg 2004). All of the doctoral supervisors in our study considered that a deep substantive knowledge of their discipline or specialization was essential for supervising doctoral students. Our data revealed that the scholarly expertise of doctoral supervisors means more than just *episteme*. For supervisors, scholarly expertise is the result of continuous, fruitful participation in the production of knowledge by conducting research, publishing academic articles and/or providing scholarly critiques that impact on thinking or theory. In the parlance of contemporary university practice, scholarly expertise is active engagement in the work of research, writing and scholarship. It is scholarly expertise, supervisors argued, that equips them with the knowledge and insights to recognise gaps in knowledge in their discipline and in the thinking and work of doctoral students, and is sustained by a passionate, personal pursuit of learning and knowledge for their own sakes. Thus, supervisors reported that the principal joy of doctoral supervision was the opportunity to advance their own scholarly expertise. In the words of one participant, doctoral supervising was:

a good way of actually keeping you on your toes about your own field ... and a source of what I’ll call intellectual pleasure ... when we get to experience our selves as intellectuals, at conferences and seminars ... that is deeply pleasurable. If we didn’t have those moments, there wouldn’t be much point to being an academic. (Humanities – male professor)

In some disciplines, scholarly expertise also includes the capacity to apply knowledge to practical, real-world situations. In economics, for instance, this might involve using knowledge of economic theory to inform government economic policy; in biochemistry, the development of a valuable new drug; in cultural studies, advice to local councils on meeting the needs of local cultural groups. Supervisors from professions particularly emphasized the importance of the practical application of knowledge:

It think it’s very important that there are many disciplines that are strongly linked to practice ... I always want to make sure what we do has relevance in the world beyond the university. (Management – male professor)

Techné

Aristotle's intellectual virtue of *techné* is often understood as craft knowledge, but it involves more than technical skills or instrumental practice. It is the creative, productive use of expert knowledge to bring something into existence or accomplish a particular objective, and to give an account of what has been produced. Supervisors described the *techné* of supervision as comprising knowledge in three areas: (i) what technical competence in the skills is needed by students; (ii) when it is appropriate to use these skills; and (iii) why these skills are important, and the capacity to communicate these reasons to students.

In terms of the 'what' of *techné*, supervisors across all disciplines identified four essential technical competencies as essential for supervising doctoral students: (i) the capacity to write, speak and communicate in ways appropriate to the discipline or field; (ii) the ability to use resources such as databases, computers and scientific equipment; (iii) skills in information management and data analysis; and (iv) expertise in guiding students in organizing and managing their time. While the specific technical skills required by supervisors will depend on a student's skills, discipline, methods and stage of candidature, *techné* involves more than technical expertise because the supervisor is a master craftsman (*technitês*) who knows not only how to do something but also the reasons for doing so, and for these reasons can teach. One supervisor illustrated this point by describing the importance of developing a broad range of writing skills amongst students:

We also get them to write user-friendly versions for industry, for professional journals, and while they are not refereed, they give the students exposure and they also get them into a different style of writing, for a particular audience. (Business – male professor)

Contextual expertise

A substantial body of research on doctoral education testifies that effective supervision requires 'contextual expertise': that is, a knowledge and understanding of the institutional and disciplinary context of doctoral study (McAlpine and Norton 2006; Pearson 2005). Contextual expertise comprises an understanding of the contemporary climate of universities in relation to the doctorate and doctoral education; the 'know-how' to access the infrastructure and resources needed by students; a knowledge of faculty and university policies, procedures and requirements for each stage of the candidature; an understanding of the tensions between different approaches and methods in the production of a doctorate; and the capacity to advise students on how to traverse this complex territory.

For the supervisors in our study, contextual expertise involved not merely a knowledge of institutional policies and procedures, but also a sense of the value and purpose of the doctorate and doctoral education as an important area of work. A number of supervisors emphasized that it was the noble purpose they attached to their work that made academic life meaningful and fulfilling; without this ingredient, supervision would be a perfunctory responsibility. This construction of contextual expertise is evident in the following interview extract:

A lot of the problems with students that I sort of 'midwived' them through was really an incompatibility [between] what they really wanted to do and [scholarly and institutional] systems which they couldn't understand their way through ... I worked out how they

could get through those rigid structures ... that's been really important to my sense of what I'm here to do, you know, what I do as an academic. (Humanities – male professor)

Supervisors explained that contextual expertise is not limited to institutional knowledge but involves an extension of the participation in the discipline that is integral to 'scholarly expertise', thereby illustrating the interconnectedness between the facets of doctoral supervising. Thus, contextual expertise also includes attending and organizing conferences, reviewing journals, being a member of editorial boards, and having collegial networks with academics and/or industry partners beyond the university. Supervisors reported that their professional networks were crucial for soliciting expert advice to help progress students' work, identifying thesis examiners, providing students with an entrée to their discipline or profession, and helping students to establish their career path. In some instances, a supervisor's professional network was decisive in ensuring the progress of a student's research:

It's the informal social network that helps students ... I've got a huge social network in health and [my student] was looking for access [to participants] but she's doing quite a politically sensitive thing so it's very difficult to get access ... a girl that I did my master's with was the clinical director of a [large metropolitan hospital]. So now we've got access to the hospital. She has a friend who is the nursing director of a [smaller suburban hospital], so now we have got access to that hospital. (Health – female lecturer)

Conclusion

The central proposition in our article is that describing doctoral supervision as a specific, specialized form of 'professional work' offers a language and discourse that captures and articulates the focused, creative and productive activities involved in supervision in the contemporary university. Similarly, theorizing the professional work of doctoral supervision as involving five interrelated facets captures the intellectual and emotional capacities, and the moral and political dimensions, involved in doctoral supervision but allows for the possibility of each facet being taken up and combined in different ways by different individuals, disciplines and institutions.

Although there are hints of the five facets in the literature on supervisor attributes, roles and styles (e.g. Acker, Hill, and Black 1994; Anderson 1988) and socio-cultural models of the doctorate (e.g. McAlpine and Norton 2006), our theory of doctoral supervising as professional work is distinctive because it offers a holistic view, from the individual to the social, that captures the commonalities *across* the diversity of individuals, disciplines and institutions involved in the doctorate.

We propose that the particular strength of theorizing doctoral supervision as professional work comprising five facets is that it provides a helpful framework for training, managing and improving doctoral supervision in contemporary universities. Two facets of supervising – *techné* and contextual expertise – encompass knowledge that is already embedded and explicit in the systematic routines, procedures, policies and practices of universities, and therefore can be easily coded, commodified, taught to and learned by doctoral supervisors. It is for these reasons that institutional training programs for doctoral supervisors often focus on these facets, both in our study university and in others with which we are familiar.

On the other hand, scholarly expertise develops from active engagement in the intellectual work of academe: research, writing and publication, and contributions to critical debate in the discipline and public sphere. While most universities do not

currently make wide use of the label 'scholarly expertise' to describe the work of supervisors, there is a growing trend in universities in Australia as well as in Europe and the USA to expect and require doctoral supervisors to be active researchers (Golde and Walker 2006; Sadlak 2004).

The expertise involved in developing the learning alliance and habits of mind are more difficult to tackle in training sessions for doctoral supervisors, for two reasons. First, they are highly complex facets of the professional work of supervision. Second, the expertise of supervisors in each facet can vary widely, because it has been gathered through 'on-the-job' experience and the accumulation of reflective knowledge. Institutions striving to build supervisors' capacities in developing the learning alliance and habits of mind may need to employ a range of initiatives, which might include assigning a mentor or critical friend to supervisors, establishing peer support groups for new supervisors, and providing structured training in the development of critical reflection skills. That the depth and quality of expertise in all five facets will vary between different supervisors adds weight to the growing importance of co-supervision and advisory panels or committees in universities.

In proposing that doctoral supervision is a specific, specialized type of professional work, we do not set out to explore how a professional identity is constructed (cf. Pratt, Rockmann, and Kaufmann 2006), and we recognize that the generalizability of our thesis has yet to be examined in different institutional and national contexts and cultures. Nor, in the current article, is there scope to identify the synergies between our five facets and the qualities and behaviours of supervisors that universities, policy makers and governments deem desirable.

Nevertheless, the indicators are that a rigorous theoretical framework for understanding the practice of doctoral supervision, and directing the training and development of doctoral supervisors, will be an important part of improving the doctorate in an increasingly diverse, competitive and globalized higher education environment. Supervisors in our study spoke of how changes in universities over recent decades had reshaped their work as supervisors, and there are few indicators that this trend is likely to ease. A theory of doctoral supervision as professional work comprising interrelated facets offers a first step in developing a new theoretical framework, discourse, and language for this important aspect of academic work in the contemporary university.

References

- Acker, S., T. Hill, and E. Black. 1994. Thesis supervision in the social sciences: Managed or negotiated? *Higher Education* 28, no. 4: 483–98.
- Allen, C.M., E.M. Smyth, and M. Wahlstrom. 2002. Responding to the field and to the academy: Ontario's evolving PhD. *Higher Education Research and Development* 21, no. 2: 203–13.
- Altbach, P.G. 2004. The United States: Present realities and future trends. In *Studies on higher education: Doctoral studies and qualifications in Europe and the United States*, ed. J. Sadlak. Bucharest: UNESCO-CEPES.
- Anderson, J. 1988. *The supervisory process in speech language pathology and audiology*. Boston, MA: College Hill Press.
- Aquinas, T. 1966. *Treatise on the virtues*. Notre Dame, IN: University of Notre Dame Press.
- Arendt, H. 1958. *The human condition*. Chicago: University of Chicago Press.
- Aristotle. 1999. *Nicomachean ethics*. Indianapolis, IN: Hackett Publishing Co.
- Australian Council of Professions. 2004. About Professions Australia: Definition of a profession. Professions Australia. <http://www.professions.com.au/defineprofession.html> (accessed November 18, 2008).

- Bartlett, A., and G. Mercer. 2001. *Postgraduate research supervision: Transforming (r)elations*. New York: Peter Lang.
- Boud, D., and A. Lee. 2005. 'Peer learning' as pedagogic discourse for research education. *Studies in Higher Education* 30, no. 5: 501–16.
- Brooks, R.L., and D. Heiland. 2007. Accountability, assessment and doctoral education: Recommendations for moving forward. *European Journal of Education* 42, no. 3: 321–62.
- Carr, W. 1987. What is an educational practice? *Journal of Philosophy of Education* 21, no. 2: 163–75.
- Carr, W. 2007. Educational research in the 21st century: Confronting the postmodern challenge. Paper presented at Action Research and Professional Practice Conference, February 7–8, at the University of New England, Armidale.
- Chambaz, J. 2008. Reforming doctorate education in Europe – A response to global challenges. In *Quality in postgraduate research: Research education in the new global environment*, ed. M. Kiley and G. Mullins. Canberra: Centre for Educational Development and Academic Methods, Australian National University.
- Connell, R.W. 1985. How to supervise a PhD. *Vestis* 28, no. 2: 38–41.
- Cribb, A., and S. Gewirtz. 2006. Doctoral student supervision in a managerial climate. *International Studies in Sociology of Education* 16, no. 3: 223–36.
- Deem, R. 2006. Conceptions of contemporary European universities: To do research or not to do research? *European Journal of Education* 41, no. 2: 281–304.
- Delamont, S., O. Parry, and P. Atkinson. 1998. Creating a delicate balance: The doctoral supervisor's dilemmas. *Teaching in Higher Education* 3, no. 2: 157–72.
- Denzin, N.K. 2001. The reflexive interview and a performative social science. *Qualitative Research* 1, no. 1: 23–46.
- Dunne, J. 1993. *Back to the rough ground: 'Phronesis' and 'techne' in modern philosophy and in Aristotle*. Notre Dame, IN: University of Notre Dame Press.
- Epstein, R.M. 1999. Mindful practice. *Journal of the American Medical Association* 282, no. 9: 833–39.
- Epstein, R.M., and E.M. Hundert. 2002. Defining and assessing professional competence. *Journal of the American Medical Association* 287, no. 2: 226–35.
- European University Association. 2008. Universities outline future priorities for improving the quality of doctoral education in Europe. http://www.eua.be/fileadmin/user_upload/files/Press/CDEpostconfdef.pdf (accessed June 7, 2008).
- Flyvbjerg, B. 2004. Phronetic planning research: Theoretical and methodological reflections. *Planning Theory and Practice* 5, no. 3: 283–306.
- Gilligan, C. 1977. In a different voice: Women's conceptions of self and morality. *Harvard Educational Review* 47, 481–517.
- Glaser, B., and A. Strauss. 1967. *The discovery of grounded theory: Strategies for qualitative research*. Hawthorn, NY: Alden Publications.
- Golde, C.M. 2000. Should I stay or should I go: Student descriptions of the doctoral attrition process. *Review of Higher Education* 23, no. 2: 199–277.
- Golde, C.M., and G.E. Walker, eds. 2006. *Envisioning the future of doctoral education: Preparing stewards of the discipline – Carnegie essays on the doctorate*. San Francisco: Jossey-Bass.
- Green, P., and R. Usher. 2003. Fast supervision: Changing supervisory practice in changing times. *Studies in Continuing Education* 25, no. 2: 37–50.
- Green, W., and A. Lee. 1995. Theorising postgraduate pedagogy. *Australian Universities Review* 2, no. 2: 40–45.
- Halse, C. 2007. Is the doctorate in crisis? *Nagoya Journal of Studies in Higher Education* 7, April: 321–37.
- Halse, C., and A. Gearsides. 2005. *A genealogy of becoming researchers: The discursive and interactive construction of postgraduate supervision*. Sydney: University of Western Sydney.
- Halse, C., and A. Honey. 2005. Unravelling ethics: Illuminating the moral dilemmas of research ethics policy. *Signs* 30, no. 4: 2142–61.
- Halse, C., A. Honey, and D. Boughtwood. 2007. The paradox of virtue: (Re)thinking deviance, anorexia and schooling. *Gender and Education* 19, no. 2: 219–35.

- Harman, G. 2002. Producing PhD graduates in Australia for the knowledge economy. *Higher Education Research & Development* 21, no. 2: 179–90.
- Ives, G., and B. Rowley. 2005. Supervisor selection or allocation and continuity of supervision: PhD students' progress and outcomes. *Studies in Higher Education* 30, no. 5: 535–55.
- Kemmis, S. 2005. Knowing practice: Searching for saliences. *Pedagogy, Culture and Society* 13, no. 3: 391–426.
- Kemmis, S. 2008. What is professional practice? Recognising and respecting diversity in understandings of practice. *RIPPLE E-Newsletter, Charles Sturt University*. http://www.csu.edu.au/research/ripple/docs/Kemmis%20Prof%20Practice%20Chapter%20060419_14.pdf.
- Lee, A. 2008. How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education* 33, no. 3: 267–81.
- Lucas, L. 2006. *The research game in academic life*. Maidenhead: Open University Press.
- MacIntyre, A.C. 1966. *A short history of ethics: A history of moral philosophy from the Homeric age to the twentieth century*. New York: Macmillan.
- Malfroy, J. 2005. Doctoral supervision, workplace research and changing pedagogic practices. *Higher Education Research & Development* 24, no. 2: 165–78.
- McAlpine, L., and J. Norton. 2006. Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research & Development* 25, no. 1: 3–17.
- McWilliam, E. 2002. Mentor, manager and mentoree: New academic literacies for research education. In *Quality in postgraduate research: Integrating perspectives*, ed. M. Kiley and G. Mullins. Canberra: Centre for the Enhancement of Learning, Teaching and Scholarship, University of Canberra.
- Minichiello, V., R. Aroni, E. Timewell, and L. Alexander. 1990. *In-depth interviewing: Researching people*. Melbourne: Longman Cheshire.
- Neumann, R. 2007. Policy and practice in doctoral education. *Studies in Higher Education* 32, no. 4: 459–73.
- Noddings, N. 2003. Is teaching a practice? *Journal of Philosophy of Education* 37, no. 2: 241–51.
- Organization for Economic Cooperation and Development. 1987. *Post-graduate education in the 1980s*. Paris: OECD.
- Pearson, M. 2005. Changing contexts for research education: Implications for supervisor development. In *Supervising postgraduate research: Contexts and processes, theories and practices*, ed. P. Green. Melbourne: RMIT University Press.
- Pearson, M., and A. Brew. 2002. Research training and supervision development. *Studies in Higher Education* 27, no. 2: 138–43.
- Pearson, M., T. Evans, and P. Macauley. 2008. Growth and diversity in doctoral education: Assessing the Australian experience. *Higher Education* 55, no. 3: 357–72.
- Pearson, M., and C. Kayrooz. 2004. Enabling critical reflection on research supervisory practice. *International Journal for Academic Development* 9, no. 1: 99–116.
- Pratt, M.G., K.W. Rockmann, and J.B. Kaufmann. 2006. Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal* 49, no. 2: 235–62.
- Rolfe, G. 1997. Beyond expertise: Theory, practice and the reflexive practitioner. *Journal of Clinical Nursing* 6, no. 2: 93–7.
- Sadlak, J., ed. 2004. *Studies on higher education: Doctoral studies and qualifications in Europe and the United States: Status and prospects*. Bucharest: UNESCO-CEPES.
- Schatzki, T.R. 1996. *Social practices: A Wittgensteinian approach to human activity and the social*. Cambridge: Cambridge University Press.
- Schon, D.A. 1983. *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- Seagram, B., J. Gould, and S. Pike. 1998. An investigation of gender and other variables on time to completion of doctoral degrees. *Research in Higher Education* 39, no. 3: 319–35.
- Tierney, W.G. 2003. Cultural disintegration and the decline of the engaged intellectual: The transformation of academic work. *Discourse* 24, no. 3: 371–83.
- Vilkinas, T. 2007. An exploratory study of the supervision of PhD/research students' theses. *Innovative Higher Education* 32, no. 5: 297–311.

- Walker, G.E., C.M. Golde, L. Jones, A.C. Bueschel, and P. Hutchings. 2008. *The formation of scholars: Rethinking doctoral education for the twenty-first century*. San Francisco: Jossey-Bass.
- Wenger, E. 1998. *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.

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