

Discrepancies between the “ideal” and “passable” doctorate: Supervisor thinking on doctoral standards

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The research degree examining process in the United Kingdom could be said to have stood still in the past 50 years, since it has changed little in that period. (Powell & Green, 2003; Joyner, 2003). The examining process itself developed at a time when a few rare and exceptional individuals undertook doctoral study and this was usually in the natural sciences and therefore the UK system is based on an implicit assumption, “that if a PhD thesis had been written and submitted, the candidate deserved the degree”(Joyner, 2003). In the UK this would still appear to be the case, since there have been very few failures of submitted thesis (Joyner, 2003). Holbrook et al (2003) in the Australian context examined 300 examiner reports and found none recommend failure although in six reports substantial revisions were mandated. A predisposition by experienced examiners to pass a thesis has been reported in other studies (Johnston, 1997; Pitkethley & Prosser, 1995; Kiley & Mullins, 2002).

In the past few years the research degree examining process has been the subject of much debate (Powell & Green, 2003). In a recent review of assessment processes in doctoral study, Denicolo (2003) made note of two somewhat paradoxical findings: that there is little cross-institutional agreement as to what actually constitutes a doctorate, and very few submitted thesis fail to achieve the award. Whilst notions such as “original contribution”, “peer reviewed publishability”, and “evidence of independent research skills” are common to most university guidelines for doctoral study, the actual criteria that underlie these attributes are rarely, if ever, made explicit in university documentation (Powell & Green, 2003). Therefore the interpretation of these notions and the weighting that is given to these components in the process of research degree examination remain idiosyncratic to the examiners themselves. As a consequence the assessment criteria for doctoral study have remained implicit and are operationalised in a subjective manner. Studies of examiner comments have also provided only limited indications of shared beliefs about underlying attributes and benchmarks, although they have been forthcoming in terms of specific categories of concern (Holbrook, Bourke, Lovat & Monfries, 2001).

It seems to us that the major explanation of the paradox identified by Denicolo (2003) lies in the implicit understandings of supervisors – those who have both the intimate “process-level” relationship with the candidate and who simultaneously play both a gatekeeper role in “signing-off” the completed thesis as suitable for examination and an examiner role for other candidates. Our first point of concern in this paper then is with the conceptions of the doctorate and doctoral process expressed by a group of supervisors in our study.

A supervisor interview study on the criteria for assessment

Senior academics from various discipline fields (Drama, Biology, Chemistry, Design and Arts, Economics) who were supervisors and who have also played the role of examiner were asked about their conceptions of a doctorate. The comments by these supervisors indicate differences of understanding about what constitutes research degree study and consequently what constitutes examination of research degree study. These differences may be viewed in two ways. First, there appears to be a historic trend towards extension of the definition of “doctoral” to incorporate the notion of research training as an equal if not prime component of the doctoral process, possibly at the expense

of scholarship. Second, there appears to be a further historical trend towards an acceptance of a discrepancy between the ideal doctorate – the one in the supervisor’s hat that is aspired to - and one that, in the examiner’s hat, is perhaps less complete but “passable”.

1. *From scholarship to research training:*

The relationship between scholarship (as the substantive contribution of a thesis) and research training (as the process of rigorously testing the assumptions of the contribution) has historically been one of congruence. Almost all university descriptors of the RHD experience will talk of both a substantive and original contribution to the field and a capacity to rigorously design and test the validity of that contribution – i.e. to be an independent researcher. The traditional balance is well reflected in the comments from two supervisors from the humanities:

My perception of a Ph D, well, an interesting and substantial area of research, entailing a substantial understanding of the theoretical surrounds of a particular topic, in most of our cases I suppose a substantial amount of that sort of research, and in most of the stuff I’ve looked at, a substantial amount of leg work, field research, so you know the sort of shape of it is a theoretical framing of a series case studies as often as not, and conclusions drawn from them that need to be coherent and readable. (Supervisor A, Drama)

... there’s some-thing at the core of this, and that’s what’s the simplicity of the abstract, so I’ve, in my thesis you can derive from my thesis a simple ratio, and it says in chapter 2 this is the simple expression, simplest expression of this thesis, it will never get any simpler, it’s just 3 lines, it says as this is to this, so this is to this, so this is to this, so that’s, now you can say to a student now this is a simple ratio so part of the key achievement here is finding and determining original simplicities, it’s not about being flamboyant and having some extravagant way of expressing it, so it’s giving them confidence that anything said simply that’s worth saying is worth twice as much as complex things that aren’t worth saying (Supervisor D, Design)

In both instances, the supervisors have indicated a conception of the doctorate that is about a substantial and embracive idea. For the Design supervisor, this is about “original simplicities”: the reduction of complex underlying thought into simpler, higher level, propositions that capture the essence of the thesis being presented. For this supervisor, the quality of the doctorate lies in the capacity of scholarship to present, in its most parsimonious form, the product of thinking. For the Drama supervisor, this process is framed in terms of the “theoretical surrounds of a particular topic”: the embedding of doctoral thinking in the prior understandings of the field. For this supervisor, embedding the research in theoretical understandings gives the “shape” to the final product. In both of these examples, there is a clear emphasis on the intellectual activity underlying the production of a thesis. Both frame their expectations in terms of the intellectuality of the process – the research training component, whilst not necessarily subservient to this process, is nonetheless clearly a servant to the overriding intellectual process.

In some fields, however, this relationship appears to be changing, at least in the relative emphasis explicitly given to the two components. It is not surprising that this development has its clearest expression in the hard sciences. The dilemma of the balance between substantive contribution and research training has not gone unnoticed amongst these supervisors –it is perhaps more a simple recognition of changed circumstance that is reflected in their views. One supervisor, from the discipline of Chemistry, commented thus:

I think if you go back 30 or 40 years the concept was that they had to significantly enhance our understanding of the subject, I think that emphasis has dropped a

little bit more, and we're now more into a training application. Not totally, I think when the thesis is submitted it's always got to be assisted if it's got some very good science and my understanding from my own perspective and from numerous readings I do is that the modern Ph D sort of in sciences is a training (Supervisor C, Chemistry)

Equally aware of the dilemma posed by the increased emphasis on research training in the hard sciences was the supervisor from the Discipline of Biology:

... so what I see as a biologist is really a research training degree, and also to complete a body of work that one might reasonably expect to sort of lead to publication in a respectable sort of journal because it has to be a reasonable contribution in general it has to lead to publication, but one can imagine a situation where that might not necessarily occur, and it might be, the work might be very important in the context of that laboratory and it may be that a few years down the track that that person will get recognition for that work that they've done. so I mean that means that that creates some sort of difficulties in terms of defining the Ph D a little bit (Supervisor B, Biology)

It is clear from all examples cited that there is agreement that a doctorate should embody both a substantive contribution (the “scholarship” component) and a rigorous command of method consistent with the needs of the project developed (the research training component). Whilst broad disciplinary differences may be apparent in the relative balance between scholarship and training, the co-existence of the two components is consistently acknowledged.

2. *From the “ideal” to the “passable”: Issues of quality and benchmarking:*

Delineating the components of a doctoral programme (as illustrated above) may not necessarily give formal insight into the issues of quality associated with completion. Given the balance between scholarship and research training, what manner of content and what manner of research training competency would indicate the passing of a critical point of “threshold” into a doctoral level outcome? Here we have a fundamental question that goes well beyond toleration of “typos” or language issues and even to some extent major revisions (Denicolo, 2003) to one that embodies the fundamental core quality of the doctoral thesis. Even a recent comment noted by one of the authors from a doctoral examination report, “This is a thesis without a thesis”, whilst indicative of a core issue, only implicitly addresses the fundamental issue – when does the quality of the thesis become doctoral?

For senior academics interviewed in this study, the issue of “quality of the doctoral thesis” was one that became increasingly central to their thinking as pressures from a variety of sources increasingly placed in jeopardy the capacity to accept only the ‘ideal’. One supervisor felt that the pressures for completion were responsible for the creation of an inferior product which he termed a “template thesis”:

... those sorts of pressures on the staff because it leads to sort of template thesis in a sense, the number of, well the publishing thing is really bizarre now because you see these template thesis turn into template books, Ralph published countless thousands of books in our area and they're all exactly the same, they have a long, long, long chapter on methodology which works it way through all sorts of things, and then 3 case studies which have got absolutely bugged all to do with the methodology and a little conclusion, and about every third new book that they put out looks exactly like that and it's, it seems to be a sort of template that that speed and pressure thing forces on thesis, and mostly the books they're publishing are revamped Ph D's, and they're just horrible, and you know, it's all those sorts of institutional pressures on stuff like that which I suppose feels like the biggest problem. I tend to think that instead of sheer bloody numbers, hanging out for quality might be a better way to go (Supervisor E, Economics)

The notion of a “template thesis” raises interesting semiotics. There are not, of course, a priori grounds for presuming that the use of a “template” necessarily implies diminution of quality. However, one suspects that in the sense used by this supervisor, there is an assumption of what might be seen as a “ clichéd” thesis, one whose primary coherence lies not in the substantive contribution or in the methodological purity but rather in its formulaic expression. In a later section, we will refer to this kind of thesis as “multistructural”. What matters to this supervisor is the acceptance of the mediocrity that this implies.

Another supervisor identified the pressures that are sometimes put on examiners to pass a thesis despite clear misgivings about the quality:

I do at least as much examining as supervising and I see a hell of a lot of stuff now that I'd be ashamed to have seen go in, so you know I think I set my standards really high, so you know the response to the thesis that has just gone in is two out of three examiners suggesting it ought to be published as is, and the third suggesting this is what you should do to get it published, you know that's terrific but I don't know whether it's permanently necessary given the state of play, you know I've seen others, examined other thesis written by people who look like they're writing their third language, totally incoherent, and you write a report of 15 pages length explaining what they need to do to do the rewrite, which would be the examiners (honorarium) rate or whatever it is works out about 9 bucks an hour, and you send this off to the university who says thank-you very much we've given him the degree, so there's this really awkward at the moment where I think because of the pressure to get more and more and more post grads, everybody's supervising too many, the quality is getting terrible, everybody knows the quality is getting terrible so I should let him through, don't be a narky examiner because it'll be your turn next, so then perhaps I should lower the standards a bit and you think well why, so that it's a very confusing issue for me at this stage on that level (Supervisor F,

For this supervisor, there is clear dissonance between what the supervisor sees as a desirable quality for doctoral assessment and what is being accepted as a consequence of the pressures (both national and institutional) being placed on supervisors and examiners. This dilemma brings into sharp focus the effect of an expanding RHD sector on the examination process and the standards used to effect this process.

The trends in doctoral study and examination noted above raise potentially serious questions about the examination process. There appears to us to be less of an issue of sense of standards (the “ideal” thesis) than there does of the degree to which it may be acceptable to compromise these standards in the face of changing student cohorts and changing national and international expectations. We see value then in at least attempting to provide some theoretical guidelines as to where the threshold of quality may indeed lie. More crucially, it may well be timely to make explicit, at least as a theoretical option, some form of criterion reference point that will minimally flag a threshold point for identifying a thesis as attaining a “doctoral” level.

When does the quality of the thesis become doctoral?

To answer the question (amongst others) “What dimensions of quality were essential for a straight pass?” Denicola (2003) distributed questionnaires to academics, current students and recently completed students in an education faculty. The results indicate a low degree of consensus about the criteria for assessment of a thesis. Excerpts from supervisor interviews above and results from Holbrook et al (2003) study of examiner comment on theses that have been revised and resubmitted also reflect a low degree of consensus about the criteria for assessment. So how do we define the attributes of a

thesis that signify a critical crossing of a threshold into a “doctoral” rather than masters or honours level of outcome?

One attempt to specify the difference between masters level outcomes and doctoral level outcomes is reflected in Powell & McCaulay’s (2002) report of Shaw’s work at Leeds Metropolitan University in the UK. This is summarised in Table 1. In describing both qualifications, Shaw acknowledges the two domains of original scholarship and research training. These are clearly fundamental to any RHD. Where Shaw discriminates between the masters and doctoral levels is in the notion of originality. In terms of the substantive contribution, a masters degree in Shaw’s model is constrained to the given - the contribution resides at the forefront of, but not beyond, that which is known. At the doctoral level, the contribution emerges from the given and extends knowing beyond that constraint.

Similarly, in terms of research training, Shaw discriminates between the mastery of technique or method as representing a masters level of outcome, and the capacity to conceptualise, design and implement a study as an independent researcher as the mark of a doctoral level of outcome. Again the primary indicator of doctoral quality lies in the capacity to push the boundaries – in this case the distinction lies in methodological terms in terms of the technical competence of the masters degree compared to the potential methodological innovation of the doctoral degree.

Building upon Shaw’s distinctions, then, we may suggest a qualitative difference between masters level degrees and doctoral degrees based upon the degree to which the boundaries of scholarship and methodology are extended. It seems that in Shaw’s conception, the masters degree is fundamentally constrained to the “given” whereas the doctoral degree is inherently about extension beyond the given. There is a conceptual overlap between the descriptors used by Shaw in discriminating between masters and doctoral level outcomes and Biggs and Collis’ (1982; 1989) use of the SOLO Taxonomy (Structure of the Observed Learning Outcome) as both a descriptor of intellectual development and as a descriptor of the structural complexity and coherence of the end-outcome of learning. Turning to the developmental notion first, Biggs and Collis (1989) identify systematic changes in the way in which individuals engage with learning as a consequence of both development and education. These developmental changes are seen as more than purely adding to what is known – they represent fundamental changes in the way in which learning is conceptualised and enacted. They represent different *modalities* of thinking. For example, Biggs and Collis (1989) suggest that from about the age of 16, students begin to question “how things are” and begin hypothesising about “how things might be” (p156). From its simplest forms in senior secondary school, this mode of questioning and theorising presumably reaches its peak at the end of undergraduate study, where the student is said to “understand, or have a workable grasp of, an entire discipline” (p157). Biggs and Collis describe this modality of thinking as *Formal-1* thought, and see it as representative of both undergraduate thinking and most professional practice.

The transition in modality of thinking from undergraduate to postgraduate levels is described by Biggs and Collis (1989) as a shift from a Formal-1 to a Formal-2 modality of thought. What does this mean? In Biggs and Collis’ (1989) words:

When one questions the conventional bounds of theory and practice and establishes new ones, one enters the Formal-2 mode. Formal-2 thought may thus be seen in high level innovations in many fields; it is institutionalised in postgraduate study and in basic research. If principles relate to other principles to form disciplines, questioning and reshaping those disciplines is to operate at a more abstract level than Formal-1 itself. (p157)

The first definition of a threshold in examination of doctorates may then come from the developmental notion of reflecting a formal-2 mode of thought. The principle of questioning “the conventional bounds of theory and practice” places at the forefront of the doctorate the modality of reasoning and thinking underlying the thesis. As Shaw has demonstrated in his descriptors, “the conventional bounds of theory and practice” (which we interpret here as relating to both the substantive concerns of the thesis as well

Table 1: Benchmarking the Masters and Doctoral level outcomes (adapted from Shaw, cit. Powell & MacCaulay, 2002)

	Masters Degree	Doctoral Degree
Qualifications at this level are awarded to students who have shown:	i a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, <i>much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice;</i>	i the creation and interpretation of new knowledge, through original research, or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication;
	ii a comprehensive understanding of techniques applicable to their own research or advanced scholarship; iii originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline. iv conceptual understanding that enables the student: -to evaluate critically current research and advanced scholarship in the discipline; and -to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses	ii a systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of an academic discipline or area of professional practice; iii the general ability to conceptualise, design and implement a project for the generation of new knowledge, applications or understanding at the forefront of the discipline, and to adjust the project design in the light of unforeseen problems;
Typically holders of qualification at this level should be able to:	a. deal with complex issues both systematically and creatively, make informed judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;	a. make informed judgements on complex issues in specialist fields, often in the absence of complete data, and be able to communicate their ideas and conclusions clearly and effectively to specialist and non-specialist audiences;
	b. demonstrate self direction and originality in tackling and solving problems and act autonomously in planning and implementing tasks at a professional or equivalent level; continue to advance their knowledge and understanding and to develop new skills to a high level;and will have:	b. continue to undertake pure and/applied research and development at an advanced level, contributing substantially to the development of new techniques, ideas or approaches; and will have:
	c. the qualities and transferable skills necessary for employment requiring: -the exercise of initiative and personal responsibility, -decision making in complex and unpredictable situations, and -the independent learning ability required for continuing professional development	c the qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex and unpredictable situations, in professional or equivalent environments.

as the methodological reasoning underlying the testing of the substantive concerns) may be reflected differentially in masters and doctoral level outcomes. Both are concerned with reasoning at the Formal-2 level. What discriminates between them is the context within which that reasoning is applied. For the masters degree, the contextual limitation is the forefront of what is known in the discipline; for the doctoral degree, those boundaries are extended. In Shaw’s descriptions:

a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice (Masters level outcome)

the creation and interpretation of new knowledge, through original research, or other advanced scholarship, of a quality to satisfy peer review, extend the forefront of the discipline, and merit publication (Doctoral level outcome)

If it is possible to discriminate between masters level and doctoral level based upon context of reasoning within a common Formal-2 modality, what then distinguishes the more successful doctorate from the less successful? Here we draw on the second aspect of the SOLO taxonomy which is concerned with describing the structural complexity and coherence of the thesis. In the case of a doctoral thesis, we can identify from the modality analysis that the thesis lies within the ballpark – that it represents a formal-2 modality in the context of extending some aspect of the discipline. The issue here is not one of a global decision on acceptability of the thesis as doctoral. Rather the issue is one of the degrees of acceptability – the distinction drawn by supervisors earlier in this paper between the “ideal” and the “passable” thesis. The point of assessing structural complexity and coherence is to determine the degree to which the thesis explicitly makes its point. At its uppermost point, the “template thesis” alluded to by Supervisor F above highlights the issue of the relationship between the explicit parts and the implicit whole. One suspects that Supervisor F has often encountered a thesis that meets the modality requirements, but which is presented as a solid technical piece without necessarily explicitly indicating the overriding point of the thesis (whether that be substantive or methodological development). How might SOLO assist in tapping in to this distinction?

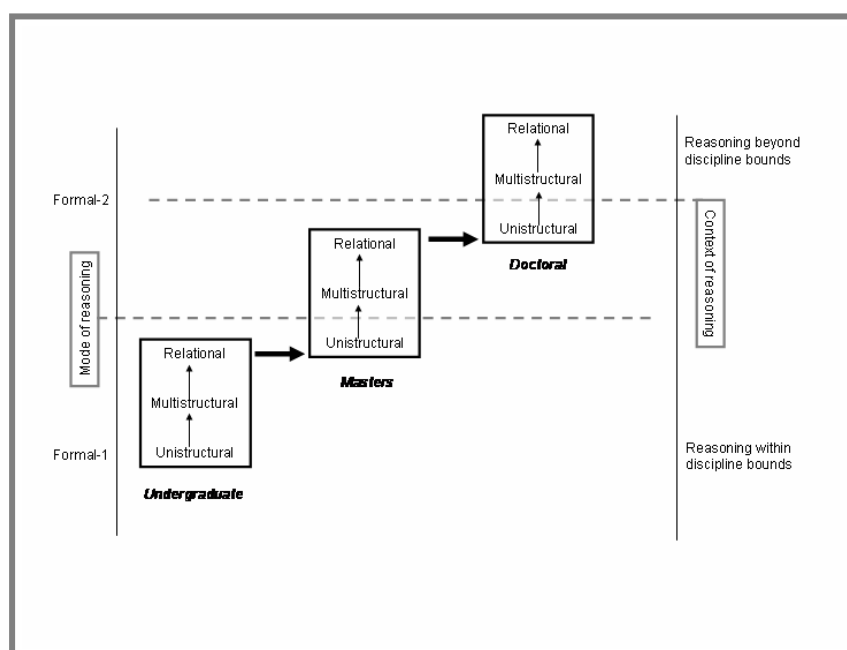
In Table 2 we reproduce the fundamental distinctions able to be drawn in a SOLO analysis. Critical in this process is recognition that a target modality exists – in this case Formal-2 reasoning in a context that goes beyond the traditional bounds of discipline knowledge. Within that target mode, three outcomes are described: a *unistructural* outcome in which key components of the task are absent or extremely poorly met; a *multistructural* outcome in which in which all necessary components of the task are present, but remain unintegrated; and a *relational* outcome in which components of the task a subservient to the overall point of the activity – where the elements are integrated into a meaningful whole. Typically we might expect, for example, the thesis that contains an “encyclopaedic” literature review, or a paucity of literature, or an inadequate empirical study etc. to be seen as unistructural in outcome. The task here was simply not met, and the thesis may at best require a major revision and resubmission if not outright rejection. More commonly, a thesis may present with all components seemingly intact, but which fails to cohere beyond the context of the individual elements. This is typically multistructural in SOLO terms, and may well reflect those elements of the template thesis alluded to earlier. For these theses, the question may not always be one of whether this is “a thesis without a thesis”. Whilst this may be the case, it may also be that the “thesis” is only implicitly present. It is a fine line between the “mediocrity” suggested by Supervisor F and simply poor scholarship in expressing the thesis. We would argue, however, that whilst all supervisors/ examiners would target the relational outcome as desirable, the grey area within the multistructural product appears to be the point of greatest concern.

In utilising the assessment framework derived from the theoretical work on the SOLO taxonomy, we have suggested that supervisor conceptions of doctoral study and doctoral standards may be mapped onto the derived SOLO/Shaw framework. Our analysis of the interview data indicated an implicit awareness on the part of supervisors, regardless of discipline, of the desired modality of thinking underlying doctoral research (which we define as a Formal-2 modality in an extended context) and of

Table 2: Modes and Levels within the SOLO taxonomy (adapted from Biggs & Collis, 1989, p152)

Mode	Structural level (SOLO)
Next	5 <i>Extended abstract</i> : Generalises the structure to take in new and more abstract features, representing a higher mode of operation
Target	4 <i>Relational</i> : Integrates the parts with each other so that the whole has a coherent structure and meaning 3 <i>Multistructural</i> : Incorporates necessary parts and features, but without integrating them 2 <i>Unistructural</i> : Focus on relevant domain, but elaborates upon only one relevant aspect
Previous	1 <i>Prestructural</i> : task is engaged but within parameters of previous mode.

the need for explicit coherence within the thesis (defined by us as a “relational” outcome within mode). As Supervisor D from a Design background expressed it earlier, the thesis must reflect “original simplicity”. An illustrative summary of this framework is presented in Figure 1. Two qualifications were evident from these analyses. First, there was a tendency for supervisors from the “hard sciences” to emphasise the research training component of the doctorate. However, this emphasis was itself always qualified by the recognition that good research always originates in a profound question. Moreover, given Shaw’s emphasis on the role of innovatory methodology as an attribute of doctoral level outcomes, it is a reasonable assumption to suggest that laboratory based doctorates may emphasise methodological attributes as a primary outcome of the process. Certainly the qualification to scholarship as a major criterion alluded to by Supervisor B is consistent with the need to recognise method as a primary object of doctoral study. Secondly, while the emphasis of supervisors was generally targeted at the relational level of outcome, there was recognition that among stronger candidates, outcomes may reflect a “beyond modality” level of independence in research skills, whilst among weaker (albeit still successful) candidates, a multi-structural level of outcome (within mode) was acceptable. It is this latter acknowledgement that may give us the closest insight into the issue of “threshold”.

Figure 1: A framework for analysing doctoral outcomes

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