A Doctor in Every House?
The PhD Then, Now and Soon

Hank Nelson

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A DOCTOR IN EVERY HOUSE?

The PhD then, now and soon

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THE AUSTRALIAN NATIONAL UNIVERSITY

GRADUATE SCHOOL FORUM

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The Common Room
University House
THE HISTORY

The PhD is a new degree. Those colour splashed and scarified PhD gowns on graduation days imply a direct link to a medieval past, to learned monks in dark cloisters who thought the day of the colour photograph was close. In fact the links to a distant past are tenuous.

The first Australian PhDs were awarded by Melbourne University in 1948. By 1949 all six Australian universities had PhD rules. In 1950 eleven PhDs were awarded within Australia. In 1960 still only 137 PhDs were awarded. For Australia, then, the PhD is a post Second World War development, and the growth has been in the last thirty years. Those distinguished scholars who taught me or were my eminent colleagues, such as Charles Rowley, Max Crawford, Bill Scott, Jack La Nauze and Manning Clark did not have PhDs. Kathleen Fitzpatrick, who lectured me at Melbourne University, had gone from her honours degree at Melbourne to Oxford to do another undergraduate degree. That was not then unusual.

It cannot be said that the Australian Universities picked up an overseas tradition which itself had a long unbroken past. In Britain the history of any higher degrees, MA or PhD, by dissertation is just over 100 years. The PhD got to England by a devious route. It went from Germany (where it increased in popularity and sharpened in definition early in the nineteenth century) to Yale which offered the PhD from the early 1860s, and it soon spread to other American colleges. American scholars wanted doctorates and those who went overseas were attracted to Germany. The intense rivalry between Germany and England immediately before and during the First World War influenced the British who did not wish to copy the German system but did not like the best and brightest of American scholars going to Germany. The British adopted the PhD from America. Oxford began its DPhil courses in 1917, but by then several British universities were on their way to introducing the PhD. Ernest Rutherford, New Zealander, physicist and Nobel Prize winner in 1908, spoke strongly in favour of the new postgraduate degree by thesis. In 1918 he said:

It should be made clear that the new degree which many universities propose is an entire innovation.... it will involve ... introducing into Britain a system practically identical with that which obtains in America, and to a large extent in Canada also.... It will be a real and very great departure in English education - the greatest revolution, in my opinion, of modern times.

The PhD took over another thirty years to get to Australia.

The Australian PhD is a product of eighty years of transitions from Germany to the USA to Great Britain to Australia. What happened in the transitions had much to do with national rivalries, perceptions of the strategic importance of research into chemistry, and prejudices in the relations between mother countries and ex-colonies.

There is a separate tradition of higher doctorates, usually in Science or Letters,

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3 Quoted in Renate Simpson p.155.
awarded for a weighty stack of publications and high standing among peers. These were awarded in Australia before the Second World War, and continue to be awarded. The ANU has granted an average of one LittD or DSc a year over the last ten years. I am not concerned about them.

The history of the PhD is short, and its present form should therefore be malleable and its future unfixed. There are several variations of the PhD in North America and in Europe, and we should feel equally free to draw on any traditions. We might also presume to have the wit to decide what is best for ourselves.

THE NUMBERS

All students doing doctorates (full-time and part-time) in Australia:

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-time</th>
<th>Part-time</th>
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<tbody>
<tr>
<td>1977</td>
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<td></td>
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<tr>
<td>1978</td>
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<tr>
<td>1992</td>
<td>13,623</td>
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</tr>
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</table>

(The figures before 1985 are from Australian Year Books, and those from 1985 are from DEET. The decline in 1989 was the result of removing many long-term students from official lists. There is some inconsistency in the month in which statistics have been collected. Over recent years DEET has taken the totals for March.)

All PhD students enrolled at ANU:

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrolled</th>
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<tbody>
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<tr>
<td>1987</td>
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<td>676</td>
</tr>
<tr>
<td>1992</td>
<td>772</td>
</tr>
</tbody>
</table>

The increase in the numbers of Australian PhD students has been most marked in the 1990s. It has been a dramatic increase - an increase of 65% in three years. We can guess that in 1993 there will be about 16,000 PhD students. In 1991 Canada had twice as many doctoral students and some 60% more people. We may expect the expansion to continue. That growth has its own implications.

In 1939 there were 10,354 undergraduates at Australia's six universities and two university colleges. There are now around 50% more PhD students in Australia than there were undergraduates in 1939. One thing we should consider doing is dropping the title Dr as a normal form of address. If not now, then when, when we have 20,000, or 30,000, 40,000 doctoral students?

iv Official Yearbook of the Commonwealth of Australia 1941, Canberra, 1941, p.158. The two University Colleges were Canberra (68 degree students) and New England (57).
The instructions to ANU examiners say that they are to consider whether the candidate has shown a capacity `to carry out independent research', has `made a substantial contribution to learning' and related the research `to the broader framework of the discipline or disciplines within which it falls'. They are certainly proper concerns of universities - independent research, advancing learning, and locating the research in a discipline. They are appropriate for university staff, they are appropriate for the training of those who will become members of university staffs. At some times and in some disciplines Australian universities will not be training enough doctoral students to meet the demand for new and replacement university staff, but it seems inescapable that increasing numbers of doctoral students will not be working in universities, nor will they be holding research positions in other institutions. More and more PhD students will be working in the public service or the private sector, and they will not be advancing learning, and they will not be drawing on the special knowledge acquired in writing their theses on wind erosion on alpine grasslands, the rice market in Mindanao, or the Austronesian languages of Bougainville. The theses, part-prepared for publication, will remain untouched in drawers, to be finally inherited by grieving children who will have had no idea of all that distant learning, all those frantic pleas for extensions to submit. Recognition that increasing numbers of postgraduates will not be working in research positions is already influencing change.

At ANU the doctoral regulations allow one quarter of the time to be taken on coursework, and several disciplines now push that limit. Students are required to take courses to equip them to do their research, to repair defects in their early education, and to broaden their professional competence. They might take five or six semester units. Our instructions to examiners no longer reflect the reality. The examiners are told: `The present candidate has not been required to submit any material by examination other than the thesis now presented.' In fact some candidates have had to jump many examination hurdles along the way - the examinations are mandatory.

The extent to which ANU moves towards coursework needs resolution. It may be found that what is appropriate for one discipline will not be appropriate for another. It may be that some disciplines will believe that they have a particular opportunity and obligation in Canberra to provide a high level, broad education for those who will be engaged in policy analysis, contingency planning, forecasting and research. Those activities that require wide knowledge, high skills and a quick imagination. If so then the case should be argued. Should the argument be accepted then the variations in the ANU PhD degree will need to be defined and codified. But at the same time I hope that ANU stresses that its strength is in research. In many fields it has a greater capacity to supervise research that other Australian universities, and within ANU and the ACT there are unrivalled resources for research. I think that strong emphasis on the research PhD should be a distinguishing characteristic of ANU, but I do not think it necessary that there just be one ANU PhD.

The need for ANU to strengthen perceptions about what is distinguished about the ANU PhD is clear. We cannot and should not recruit just from the ACT, and we should be aspiring to attract the best from elsewhere. In 1977 about 10% of all PhD students were at ANU. In 1992 it was about 6%. ANU is now just one of 38 institutions with students enrolled in PhD courses. The University of Sydney has twice as many PhD students. ANU is not so important quantitatively. It needs to distinguish itself in ways other than bulk.

As numbers of doctoral students increase there is growing pressure on supervisors and
advisers. At ANU we have a policy of having supervisory panels of at least three - a combination of supervisors and advisers. Inevitably the burden of supervision falls unevenly. Just within RSPacS some senior members of staff have no students or one or two students, and others have their names on fifteen or so supervisory panels. The function of the supervisor varies from discipline to discipline, and perhaps we will never be able to apply uniform rules, but I guess that for a conscientious supervisor twenty students would be a full-time job. The University ought not expect such a person to do any other teaching or any research. I suggest that we decide what is the maximum load for the main supervisors (as opposed to advisers), and that it be halved. No university staff member should spend more than half-time on supervision.

The increased numbers of students also increase demands on examiners. It is only from this year that we will begin to feel the impact of the rapid growth which began from the end of the 1980s. In 1992 4478 students began their doctoral studies. There are, then, enough students in the system, to mean that we will soon need to find examiners for 3000 students finishing in one year - nearly double the number who finished in 1991. That is 9000 examiners.¹ If each takes five days then that will be the equivalent of 180 senior academics doing nothing but examine doctoral theses through a forty-eight week year. If each were on $50,000 then that is $9,000,000 in salaries required to support those examiners. This is apart from the $260 fee, plus another $55 if they attend an oral examination.

I do not suggest that there should be fewer examiners or they should work faster: three or four years of research at the highest level deserves the prolonged scrutiny of at least three senior scholars. I just draw attention to the problem of finding enough examiners.

Within some of the Research Schools there is now a clear imbalance in the number of PhD students and the number of postdoctoral fellowships. Where in 1992 the Research School of Pacific Studies had some 140 doctoral students it had just eight PDFs. ANU might fulfill its national obligations better were it to take in more postdoctoral researchers.

THE EXAMINERS

Over the last couple of years I have carried out surveys of PhD examination reports, of examiners and of the examined. These comments arise out of those surveys and from being involved in a minor way in the examination of the 140 PhD students in the Research School of Pacific Studies.

The examiners I surveyed were historians. Just a few historians do most of the examining. By contrast about one third of those surveyed have never been asked to examine. Some of those surveyed commented that they believed that examining was dominated by a few, but none went on to make the charge that as a result certain schools, methods, ideologies have been preferred over others. But of course that is the danger when a few come to be the dominant examiners.

I tried to find out how people became examiners. Nearly half had read no reports other than those on their own theses when they were first asked to be examiners. Most

¹ Not all Australian universities demand a minimum of three examiners, and in some cases four examiners are appointed. Over half of ANU examiners are from overseas, so this is far from exclusively a demand on Australian academics.
university staff members in the normal course of events read few examiners' reports. So how do new examiners find out the standard of a PhD? How do they know what a PhD exam report is? The process is mysterious. Perhaps they correct a couple and from then on they are in a self-confirming cycle.

When we survey actual examiners' reports we find a diversity, and we would expect considerable diversity. Reduced to A4 single space, examiners reports average two pages - but they vary from over twenty pages to a few lines. The shortest I have encountered was four lines. It cost ANU $65 a line. The longest section was in the covering letter and it said where the cheque was to be sent.

Examiners vary in what they do. They are uncertain whether they are proof readers and copy editors. Some meticulously list all minor typing and grammatical errors and this then becomes the longest part of the report. Some mark the minor errors in pencil on the thesis, and others just make a general comment on the accuracy of presentation, but do not mark particular errors.

They vary in whom they address: some write a detailed account addressed just to the candidate, others seem to have a much broader audience in mind - a panel of their peers perhaps. Some write broad generalisations - like book reviews. Others tie everything to a line, paragraph, or pages. Some check sources and rework calculations. Others do not. Many discursive book review style comments are of little use. For example, an examiner might say: `The candidate should have taken more account of the arguments of Thistle and Stick....' What did the examiner want - an extra footnote, an extra line, a paragraph, a few pages, a reworking of the conceptual framework? The good examiners' reports make the broad comments, but also tie the comments to the text.

A significant disagreement among examiners in history and in the social sciences is the extent to which there must be a thesis, a sustained argument. A student might make a study of Australian policy in Papua New Guinea in the 1950s. There is no doubt that he has had access to a mass of new documentary material, has analysed it with care and imagination. He has told us much that is new. He has made sharp conclusions on Australian policies on education, on courts, health and other things. It is well written. It will no doubt be published as a book. But it has very little overt theoretical framework, and no dominant argument set down in the first chapter, illuminated in each subsequent chapter, and restated at the end. Some examiners would say that this is original research of publishable quality and pass it without question; others would worry about the lack of a thesis. Such examiners make a clear distinction between a book and a thesis.

The ANU instructions to examiners tell them that the candidate must relate the work `to the broader framework of the discipline' and that the thesis must be `a connected piece of writing'. This is in fact a lot less than demanding that the research be explicitly related to half a dozen theoretical luminaries, and all the writing directed to the pressing home of a particular argument.

You may think that examiners will not read in detail the instructions sent to them with the thesis. They may not. But if they do they will find that the basic instructions issued to them vary from university to university. To take two cases, the UNSW says that the thesis must make a `significant contribution to knowledge' and the way to gauge that is to `consider the extent to which the thesis is publishable'. The University of New England tells examiners
that the `primary purpose of the candidature is advanced training in research methods. It is therefore important that the skill, competence and ability of the candidate be fairly assessed irrespective of the finality of the research results'. Note the emphasis on training and method - and that's a long way from producing a publishable piece of work.

Under the heading of `Standard of Examination' examiners of ANU theses are not given specific guidance on whether the thesis is primarily to demonstrate successful training or it is to be of standard publishable by one of the specialist publishers in the discipline. But there is a firm indication that ANU wants more than training in research. As explained earlier, examiners are told that the thesis is to a `substantial contribution to learning'. In that debate, ANU wants research results; not just exercises in research.

A survey on PhD examining was sent to about 150 recent ANU graduates and half of them have replied. Sixty-five per cent of students were completely satisfied with their examiners, and one third of students were dissatisfied with at least one examiner. I am uncertain how to interpret that. Would we have guessed more or less dissatisfaction? The least we can say is that there is room for improvement.

Several conclusions from looking at examiners' reports and the various instructions given to examiners: There is some variation in what Australian universities think is the purpose of the PhD and what constitutes a successful thesis. Examiners themselves vary, but only on 10% of students is there serious disagreement. The number of students who fail outright on the first or second submission is very slight - about 1%. Another 27% do not complete. The process is one of attrition along the way - not of failing at the final hurdle. The actual examinations are significant, but not critical for most students.

Given that the PhD examination determines careers, examines at least three years of work, and sets standards for disciplines and institutions, it is surprising that we think so rarely about how we examine PhDs. It is rarely ever discussed in seminars. It is not written about in journals. Those with a particular view of the PhD, examine PhDs and confirm for themselves that what they do is right, are rarely exposed to alternatives. It is time the various disciplines began debating how to ensure that examiners are as well-informed as possible.

THE GOVERNMENT

I just want to say a few things about increasing government regulation of postgraduate students. I will restrict comment to the impact of the 1989 change to the conditions of award of scholarships limiting scholarships to three years with the possibility of a maximum three months' extension. The decision was in defiance of the empirical evidence. Very few students have been able to complete within three years. In Australia as a whole it seems that only 39% finish in four years, and 59% in five years. The average is somewhere between four and five years.

By imposing a strict time limit we have handed an advantage to those overseas universities willing to provide longer scholarships. We now have a case of a student making a choice between a scholarship for five years at Cornell or one for three at ANU.

It is clear that in some disciplines it is impossible to complete a PhD in three years - unless the nature of the PhD is changed. This applies to those disciplines where the student has to acquire a new language. One standard study for anthropology students, a rite of
passage in fact, is to go into the field, learn a language and gather data, and write up a study which in many cases becomes a monograph. This university has produced many such monographs - one of the first was Marie Reay's study of the Kuma, and I notice that she spent fifteen months in the Wahgi Valley. Ken Read, another early doctoral student, had two years in the field near Goroka. Prehistorians who excavate a significant site, and all students whether in history, economics or biology who need to learn a new language to operate in the field or to read documents, simply require more than three and a half years.

The ANU has changed its statement of about the standard of the degree. It now states that the research will be of a scope and size that could be completed within three years. It also says it will be at 'the internationally recognized' standard for a doctorate. If we mean at the highest international standards then those two statements are contradictory: the standard of the best dissertations, the standard attained by ANU graduates in the past, is not attained within three years.

The system of selecting students for entry to PhD courses forces us into finer and finer judgement on undergraduate records. Alas the evidence is that undergraduate capacity to pass examinations has little correlation with success in research.\footnote{Estelle Phillips, ‘The Concept of Quality in the PhD’ in David J Cullen, ed, \textit{Quality in PhD Education}, The Centre for Educational Development and Academic Methods, ANU, Canberra, 1993, p.14.} We are measuring with greater precision what is largely irrelevant.

Government attempts to monitor and to force apparent efficiencies, have unexpected consequences. They direct attention to what is easily measured; but to limit time is also to change the scope and nature of the research.

THE GRADUATE SCHOOL

Our anthropologists tell that when a people convert to a new religion, they often do not replace their old religion with the new: they add the new religion to the old. They practice with sincerity, and without apparent contradiction, both the old and the new.

At ANU we converted to a Graduate School in 1990. There were good reasons for the conversion; but we added the new, and the old structures continue. We now have this situation. A student in, say Geography, may be

- in the Department of Human Geography,
- in the Division of Society and Environment,
- in the Research School of Pacific Studies,
- in the Institute of Advanced Studies,
- in the Graduate Program in Geographical Sciences,
- in the Graduate School.

The student may also have registered an affiliation with two other programs. That is a mass of concentric and overlapping circles. There is no clear hierarchy. Different decisions are made at different points, and at several points. Five levels are involved in the allocation of scholarships. Examiners are nominated at one level and approved at a multitude. The discipline seems to be represented at two points. The checks and balances of other disciplines have a chance to comment at two points, and then there is the Dean of the Graduate School and the Graduate Degrees Committee.
To select names for the heads of the various levels has stretched our vocabularies, and will always test our memories:
Heads of Departments,
Convenors of Divisions,
Directors of Research Schools,
Convenors of Programs,
Dean of the Graduate Program.
Our inventiveness failed where we have Convenors of Divisions and Convenors of Programs. We have an excess of inventiveness where we have a History Program in the Research School of Social Sciences, a History Division in the Research School of Pacific Studies, and a History Department and an Asian History Centre in the Faculty of Arts. That is, four different terms at the base level. Our inventiveness may have failed when we chose to have a Graduate `School'. `School' in this sense is clearly different from the way in which it is used in the seven research schools.

The problems of semantics are evidence of complexity. There is a confusing hierarchy, whether line of command or tiers of collegiate responsibility, and there is a significant division within some disciplines. The section of the discipline that controls a budget, possesses rooms and hires staff is now declining in power relative to the section of the discipline that selects doctoral students and directs their studies.

The administration of ANU PhDs is not careless or unjust. There is considerable evidence from completion rates and the time taken by examiners that ANU doctoral students have better pastoral and administrative care than most. But there is still much to be done to make the ANU administrative system simpler and more efficient - to ensure that decisions are taken at the most relevant point, and not subject to an excess of nominal checks.

CONCLUSION

There are many topics which I have omitted: the balance between male and female students; the relative numbers of overseas students; the influence of full-fee-paying students; the changes taking place in the fields of study undertaken by doctoral students, and whether these changes are in the right direction; the impact of new technologies on the content, writing and presentation of theses; the relationship between supervisors and students; the funding of doctoral studies for universities and for students.

I have said that the PhD is new, and that should help us see it as malleable. Numbers of PhD students are increasing rapidly, and that alone puts pressure on current practice.
More graduates will be working outside universities. Already some doctoral programs at ANU push the limit allowed on coursework.
Our instructions to examiners are no longer true in all cases: the thesis is not the only work submitted for examination.
ANU is declinly relatively in numerical significance as a centre for PhD students and should exploit its advantages by stressing the importance of its research doctorate, but there need not be just one form of PhD at ANU.
The increasing numbers of doctoral students put pressure on supervisors and examiners, and we should think about work loads and efficiencies.
In some Schools there is clearly an imbalance between the numbers of doctoral students and post-doctoral places - closing opportunities for the best students to continue in
research.

More needs to be done to educate examiners.

There is disagreement about whether the dissertation must be a thesis, a sustained argument, and about the extent to which it is a training exercise rather than a completed piece of research.

The limiting of scholarships to three (at most three and a half) years defies the evidence, and either students scrape along on scrouged money or what is demanded of the students is changed. ANU's current guidance for examiners is contradictory: the thesis will be at the highest international standards and it will be of scope to be completed in three years. In some disciplines it cannot be both.

The selection of candidates is inescapably difficult, but the present system forces universities to place too much emphasis on what can be quantified.

Since the formation of the Graduate School, ANU has had an excess of groups and levels, and we should aim for greater simplicity and efficiency.