0914 <del>1273</del> D139

## WRESTLING WITH A FINE WOMAN:

# THE HISTORY OF POSTGRADUATE EDUCATION IN AUSTRALIA 1851 - 1993

The Struggle for Knowledge hath a Pleasure in it like that of Wrestling with a Fine Woman. (Lord Halifax, Seventeenth Century)

#### ANDREA DALE

B.A. (The University of Adelaide)

Dip. T. (Wattle Park)

Thesis submitted to the University of Adelaide
in fulfilment of the conditions of the

Degree of Doctor of Philosophy

Department of Education, The University of Adelaide

South Australia

December, 1997

### TABLE OF CONTENTS

	PAGE
SUMMARY	XVII
DECLARATION	xvIII
ACKNOWLEDGEMENTS	XIX
ACRONYMS AND ABBREVIATIONS	xx
INTRODUCTION	1
PREAMBLE	1
RESEARCH OBJECTIVES	1
POSTGRADUATE DEFINITIONS	5
LITERATURE REVIEW	6
OVERSEAS RESEARCH	6
AUSTRALIAN RESEARCH	12
ACCOUNTS OF CHANGES IN HIGHER EDUCATION	13
RECENT AUSTRALIAN LITERATURE	16
SUMMARY OF AUSTRALIAN RESEARCH	18
METHODOLOGY AND SOURCES	19
ORGANIZATION OF THESIS	20
CHAPTER ONE: HISTORICAL MODELS OF POSTGRADUATE EDUCATI	ON 22
EARLY EUROPEAN BACKGROUND	22
THE UNITED KINGDOM	25
THE MA DEGREE	28
BRITISH UNIVERSITY MODELS	30
THE GERMAN PHD MODEL	30
AMERICAN POSTGRADUATE MODELS	39

TABLE OF CONTENTS (CONT)	PAGE
THE AMERICAN PHD	40
THE AMERICAN MASTERS DEGREE	45
THE INTRODUCTION OF THE PHD TO BRITAIN	48
BRITISH POSTGRADUATE EDUCATION 1918-1939	50
THE SECOND WORLD WAR AND ITS AFTERMATH	52
POSTGRADUATE EDUCATION IN THE UNITED STATES	52
POSTGRADUATE EDUCATION IN THE UNITED KINGDOM	55
CONCLUSION	59
CHAPTER TWO: THE SPIRIT REMAINS THE SAME: POSTGRADUATE EDUCATION IN AUSTRALIA 1851-1939	61
THE NINETEENTH CENTURY UNIVERSITY	61
THE INFLUENCE OF UK MODELS	63
NINETEENTH CENTURY AUSTRALIAN DEGREES	68
THE BA DEGREE	69
THE MA DEGREE	70
First postgraduates	70
"Unearned" Degrees at Melbourne and Sydney	70
The MA at Adelaide	72
The University of Tasmania MA	73
Early MAs at Sydney and Melbourne	73
The Moral Function of the Early MA	74
Early Arts Faculties	75
The DLitt Degree	76
PROFESSIONAL POSTGRADUATE DEGREES	. 76
MUSIC	77
LAW	78
MEDICINE	79
ENGINEERING	80

SCIENCE AND THE MSC DEGREE	. 83
The University of Adelaide	83
The University of Sydney	83
The University of Melbourne	83
The University of Tasmania	84
Research and the MSc and Dsc	84
EARLY WOMEN POSTGRADUATES	85
First Australian Postgraduate	86
First MAs at Melbourne	86
First MAs at Sydney	87
First MAs at Adelaide	87
First Music Postgraduate	87
The MSc at Melbourne and Sydney	88
Medical Postgraduates	88
Teaching and the MA	88
HIGHER DOCTORATES	89
The DSc	89
The DSc at Sydney	89
The DSc and the PhD	90
The DSc at Melbourne	90
The DSc at Adelaide and Tasmania	91
The LLD	91

92

TABLE OF CONTENTS (CONT)

The DLitt

RESEARCH IN THE EARLY TWENTIETH CENTURY	93
Funding and Scholarships	93
Queensland and Western Australia	94
Examinations and Theses	94
New Postgraduate Courses	94
Veterinary Science and Dental Science	95
New Medical Courses	95
New Patterns for Research Degrees	96
Influence of Overseas PhD Models	96
Attempt to Introduce the PhD	97
THE CSIR 98	
Genesis	98
Initial Federal Involvement	100
THE NATIONAL UNIVERSITY MOVEMENT	100
First Proposals	100
Commonwealth Funding Sought	101
THE PATTERN OF TERTIARY GROWTH	102
Comparative Enrolments	102
Female MAs	102
The Depression and the Universities	103
First Official Statistics - 1939	103
Changed Function of the MA Degree	105
Growing Research Ethos	106

TABLE OF CONTENTS (CONT)

CHAPTER THREE: AN ADVENTURE IN IDEAS: FROM THE INTRODUC THE PHD DEGREE TO THE MURRAY COMMITTEE	CTION OF 107
THE INTRODUCTION OF THE PHD	107
Correspondence Between the Universities of Melbourne and Adelaide	107
Responses of Other Universities	108
Introduction Across Australia.	109
THE STRUCTURE OF THE EARLY PHD	110
Regulations	110
The PhD and Higher Doctorates	111
Science and the PhD	112
Melbourne's Science Faculty	112
Competition from the ANU	114
EARLY PHDS	114
The First Australian PhDs	114
Early PhD Growth	116
THE PHD AND THE SCIENCES	117
The New South Wales University of Technology	117
Shortage of Scientists	117
Growth in Science PhDs	118
Early Female Science PhDs	119
THE HUMANITIES AND THE PHD	120
Early Attitudes to the PhD	120
Introduction of the Degree	121
Sydney's Objections	121
Early PhDs Awarded	123
Staff Candidature	123
LIBRARIES	124
WARTIME RESEARCH AND LATER OUTCOMES	127
Research Centres	127

	Department of Post War Reconstruction	128
	J.J. Dedman	128
	The Walker Committee	129
	The Universities Commission and the CRTS Scheme	129
	Increased Commonwealth Involvement	130
A.P.ROV	YE	130
	Effect on the University of Adelaide	131
	Attitude to Research	132
	Rowe and the Murray Committee	132
THE WA	ITE AGRICULTURAL RESEARCH INSTITUTE	133
	Research Role and Reputation	133
	Overseas Postgraduates	134
	Influence of A.P. Rowe	135
THE AU	STRALIAN NATIONAL UNIVERSITY	135
	Research purpose	136
	Dr. H.C. Coombs	136
	Sir Howard Florey	136
	Alfred Conlon	137
	Dr. H. V. Evatt	137
	The School of Physical Sciences	138
	Sir Mark Oliphant	138
	Philosophical Underpinnings of the ANU	140
	Formal Establishment	141
	A Postgraduate University	14
	First Students	142

TABLE OF CONTENTS (CONT)

TABLE OF CONTENTS (CONT)	PAGE
THE NEW SOUTH WALES UNIVERSITY OF TECHNOLOGY	143
The War and Technological Education	143
Early Proposals	143
A New Kind of University	144
Early Degree Courses	145
Faculty Nomenclature	146
Postgraduate Schools	146
Coursework	146
The Master of Technology	147
Renaming the University	147
SUMMARY	147
CHAPTER FOUR: THE WATERSHED YEARS	150
THE MURRAY COMMITTEE	150
BACKGROUND	150
Manpower Planning	150
Role of AVCC	151
A.P. Rowe and Menzies	151
Establishment of the Committee	152
Members of the Committee	152
Menzies and Higher Education	153
THE COMMITTEE'S FINDINGS	155
POSTGRADUATE WEAKNESSES	156
SCIENTIFIC RESEARCH	157
RECOMMENDATIONS OF THE MURRAY REPORT	158
OUTCOMES OF THE MURRAY REPORT	160
The Humanities	161
Growth in the University System	162

TABLE OF CONTENTS (CONT)	PAGE	
Growth in Higher Degrees	163	
Staff Growth	165	
Postdoctoral Research	165	
THE MARTIN COMMITTEE OF ENQUIRY	166	
The Universities Commission and the Establishment of the Committee	166	
The Binary System	166	
Sir Leslie Martin and Science Research	167	
Sir John Gorton	169	
Postgraduate Education	170	
Professor Peter Karmel	170	
Submissions to the Enquiry	170	
Proposed Postgraduate Expansion	172	
THE COMMITTEE'S FINDINGS	172	
Honours, Scholarships, Coursework	172	
Universities of Technology	174	
Overseas Study and the Humanities	174	
Postgraduate Mobility	175	
Libraries and the Humanities	176	
Comparison of the Two Reports	177	
The Binary Policy and CAEs	177	
POSTGRADUATE PROGRAMS IN THE HUMANITIES	179	
EXPANSION IN THE TERTIARY SYSTEM	181	
CAES AND POSTGRADUATE STUDY	182	
CAE Degree Courses	182	
Management Education	184	
Problems with the Binary System	185	
RESEARCH AND POSTGRADUATE FUNDING	186	
Postgraduate Awards Scheme	18'	
THE WHITLAM YEARS 1972-1975	183	
Access and Equity	188	

TABLE O	F CONTENTS (CONT)	PAGE
	CAE Growth	189
	Female Students	189
	The Postgraduate Sector	190
SCIENCI	E AND PHD GROWTH	190
	PhD "Oversupply"	191
	Postdoctoral Research	191
	Biochemistry and the MSc	192
	The Making of Professional Scientists	193
	Lack of National Science Policy	194
SUMMAR	RY	195
CASE STU 1957-1975	UDY: THE UNIVERSITIES OF ADELAIDE AND NE	W SOUTH WALES
ADELA	IDE	197
	Pattern of Postgraduate Study	197
	First Arts PhDs	197
	New Higher Degrees	198
	Biochemistry	198
	Scale of Postgraduate Growth	199
	Overseas Postgraduates	199
	Professional Postgraduate Courses	199
UNSW		200
	Pattern of Postgraduate Study	200
	Unisearch	200
	Changes after 1960	200
	Collaborative Research	201
	External Postgraduate Studies	202
	New Masters Coursework Degrees	202
	Riochemistry	203

TABLE OF CONTENTS (CONT)	PAGE
Arts Higher Degrees	203
New Schools and Faculties	203
CHAPTER FIVE: CONTRACTION AND REACTION 1975-1987	206
A HALT TO EXPANSION	206
Total Student Numbers	206
Tertiary Education Commission	208
Government Funding for Research	208
THE FRASER YEARS 1975-1983	209
Tertiary Inquiries	209
Postgraduate Enrolments	210
Attitudes to Postgraduate Education	210
THE WILLIAMS REPORT	212
Membership of the Committee	212
Postgraduate Recommendations	213
Economic Considerations	213
CHANGES AFFECTING POSTGRADUATE EDUCATION	215
Part Time Study	217
Scholarships	217
Coursework Programs	219
GROWTH IN THE COLLEGES OF ADVANCED EDUCATION	219
ISSUES OF CONCERN	220
Postgraduate Unemployment	221
Access and Equity	222
Credentialism	223
FUNCTION AND REFORM IN POSTGRADUATE EDUCATION	224
The PhD - Training or Education?	226
Mooted Reforms	227
A Challenge to the Dissertation	227
X	

TABLE OF CONTENTS (CONT)	PAGE
Social Research	228.
Science and Higher Education Policy	228
Federal Expenditure	229
Research Centres of Excellence	229
THE EARLY LABOR YEARS 1983-1987	230
Undergraduate Growth	230
Postgraduate Scholarships Review	231
Other Postgraduate Reports	233
Australian Research Grants Scheme	234
Decline in Tertiary Funding	235
Completion Rates	235
CAEs and Applied Research	236
Key Centres of Teaching and Research	236
Postgraduate Pressures in CAEs	237
THE 1986 REVIEW OF EFFICIENCY AND EFFECTIVENESS IN HIGHER E	EDUCATION 238
PHD GROWTH IN THE 1980S	239
SUMMARY	240
CASE STUDY: THE UNIVERSITIES OF ADELAIDE AND NSW 19	975-1987 243
ADELAIDE	243
Pattern of Postgraduate Study	244
Primacy of the Research Degree	244
Female Students	244
Overseas Students	245
New Research Centres	245
Geography	246
Biochemistry	246
UNSW	246
Pattern of Postgraduate Study	246
Australian Graduate School of Management	247

TABLE OF CONTENTS (CONT)	PAGE
Postgraduate Research and Coursework	249
Female Students	249
New Research Centres	250
Geography	250
Biochemistry	250 251
Diothemstry	251
CHAPTER SIX: THE PARTICIPATION REVOLUTION 1987-1993	253
THE UNIFIED NATIONAL SYSTEM AND POLICY CHANGE	253
THE GREEN AND WHITE PAPERS	256
THE HIGHER EDUCATION CONTRIBUTION SCHEME	259
THE AMERICAN GRADUATE SCHOOL MODEL	259
QUALITY AND DIVERSITY	260
QUALITY IN RESEARCH	262
DIVERSITY	263
ALTERNATIVE DELIVERY MODES AND INDUSTRY LINKS	264
HIGHER EDUCATION COURSES AND GRADUATE STUDIES	264
Postgraduate Recommendations	265
Fee-paying Courses	266
GROWTH IN THE SYSTEM	267
School Retention Rates	267
Effects of the Recession	268
Total Tertiary Enrolments	269
Postgraduate Enrolments	269
OUTCOMES OF THE REPORTS	273
POSTGRADUATE MOBILITY	273
OVERSEAS POSTGRADUATE STUDENTS	274
POSTGRADUATE SCHOLARSHIPS	277
CHANGING SITES OF POSTGRADUATE EDUCATION	279

TABLE OF CONTENTS (CONT)	PAGE
Co operative Research Centres	280
COURSEWORK HIGHER DEGREES	281
FEE-PAYING POSTGRADUATE COURSES	283
POSTGRADUATE DIVERSITY	285
Female Postgraduates	285
A Fair Chance for All	287
OPEN LEARNING	289
GRADUATE SCHOOLS	290
LIBRARIES	292
NATURE, STRUCTURE AND FUNCTION OF RESEARCH DEGREES	293
PROFESSIONAL DOCTORATES	294
COMPLETION RATES .	295
QUALITY ISSUES	297
SUMMARY	299
CASE STUDY: ADELAIDE AND UNSW 1988-1993	301
ADELAIDE	301
Pattern of Postgraduate Study	301
Research and Graduate Studies Branch	302
Female Postgraduates	303
Overseas Students	3035
THE DISCIPLINES OF GEOGRAPHY AND BIOCHEMISTRY	303
GEOGRAPHY AT ADELAIDE	304
BIOCHEMISTRY AT ADELAIDE	306
THE UNIVERSITY OF NEW SOUTH WALES	307
Pattern of Postgraduate Study	307
Research and Coursework	308
Dean of Postgraduate Studies	309

TABLE OF CONTENTS (CONT)		
Female Postgraduates	310	
Overseas Students	310	
GEOGRAPHY AT UNSW	310	
BIOCHEMISTRY AT UNSW	312	
CONCLUSION	315	
INFLUENCE OF MODERN OVERSEAS MODELS	315	
Resource Funding	316	
Organizational Structure	318	
Professional Doctorates	319	
Global Competition	320	
THE EFFECTS OF THE DAWKINS CHANGES	321	
GOVERNMENT AND POSTGRADUATE POLICY	321	
QUALITY ISSUES	323	
ADOPTION OF ASPECTS OF THE AMERICAN MODEL	324	
THE POSTGRADUATE FUTURE	324	
THE PHD PARADOX	325	
MASS HIGHER EDUCATION	326	
NEW POSTGRADUATE MARKETS AND MODELS	327	
AN EMERGENT QUATERNARY SECTOR	327	
A NEW THRESHOLD	328	
BIBLIOGRAPHY	329	

#### **APPENDICES**

	APPENDIX I	Postgraduate Timeline to 1939	356
	APPENDIX II	Ordinary Examination for the MA Degree The University of Sydney Calendar 1890	357
	APPENDIX III	Ordinary Examination for the MA Degree	358
	APPENDIX IV	LLD Examination The University of Sydney Calendar 1890	359
	APPENDIX V	Regulations for the PhD Degree The University of Sydney Calendar 1949	360
	APPENDIX VI	Regulations and Application Form for the PhD Degree	361
L	IST OF TABL	LES	
	TABLE 2.1	Higher Degree Envelments 1020	104
		Higher Degree Enrolments - 1939	104
	TABLE 4.1	Degrees Conferred: All Universities 1949-1965	161
	TABLE 5.1	Students Enrolled at CAEs by Course Level 1974-1977	206
	TABLE 5.2	Number of Students, Australian Universities 1946-1979	207
	TABLE 5.3	Commonwealth Postgraduate Awards 1959-1983	218
	TABLE 5.4	Total Identifiable Research Expenditure per University Research Worker	229
	TABLE 5.5	Higher Degree Students in Universities and CAEs: 1975, 1980, 1985	239
	TABLE 5.6	UNSW: Student Enrolment by Level of Course 1948-1991	248
	TABLE 6.1	Total Students, by Level of Course 1982-1992	272
	TABLE 6.2	Proportion of Women Completing Higher Degrees, by Field of Research,	285
	TABLE 6.3	Higher Degrees Conferred at Adelaide and UNSW, 1991	314
	TABLE 6.4	Higher Degree Research Students by Institution, 1990-1993	314

TA	RI	E (	$\mathbf{OF}$	CON	TENT	rs ((	CONT	1
$\mathcal{L}$	$\mathbf{D}$	, L	Or '	con	LEMI	$\mathbf{O}$		

### LIST OF FIGURES

FIGURE 4.1	Possible Future Student Distribution (20% of 17-22 Year Age Group)	172
FIGURE 6.1	Higher Degree Enrolments at Australian Universities 1982-1993	272

#### **SUMMARY**

Since the Report of the Committee on Australian Universities in 1957, postgraduate education in Australia has expanded greatly in comparison to the relatively minor role it played in the nineteenth and early twentieth centuries. This thesis examines the history of this transformation and in particular, the rise of the research degree, culminating in the introduction of the PhD to Australia in 1946. It discusses the subsequent diversification of postgraduate education to include coursework, professional doctorates, diplomas and certificates.

The thesis analyses the change in the credentialling role of the postgraduate degree, from the moral dimension it carried in the nineteenth century to that of a sifting and accrediting mechanism in the twentieth century. It assesses, in particular, the influence of overseas models of postgraduate education on the development of an indigenous system and the impact of the rise of science and scientific method in the development of the modern research university.

It examines the increased role of the state in the transformation of the university from an elite to mass institution, with concomitant effects of this on postgraduate education. It contends that the changing relationship between state, universities and the research sector, combined with gradual loss of university autonomy, has impacted strongly on a hitherto relatively independent postgraduate sector. As universities have become increasingly assimilated into the marketplace and state, corporatization, entrepreneurial activity, direction of research and university development by government have directly impinged upon the postgraduate sector. The thesis argues that, in a mass tertiary education system, postgraduate qualifications have acquired differential market value. Aligned with this, multiple pressures for growth in the postgraduate and postdoctoral areas have effectively created a new tier of education - that of a quaternary sector.

The thesis concludes with an assessment of the impact of the Dawkins years on postgraduate education, current influence of overseas models, and an analysis of future trends within the sector, both nationally and internationally.