

REVISED AFTER  
PUBLIC PRESENTATION AND  
RESEARCH COMMITTEE DISCUSSION

**A REVIEW OF  
SOCIAL SCIENCE RESEARCH  
AT LINCOLN UNIVERSITY**

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## SUMMARY

There are two social science departments and three centres directly involved in social science research at Lincoln University, and three professional departments informed by social science research.

About one quarter of staff and an estimated total of 57 masters and Ph.D. graduate students at Lincoln University have some involvement with social science research.

Two departments and most centres typically undertake primary social science research drawing on social science disciplines to study a range of social phenomena. The professional departments, one centre and some natural science departments undertake secondary social science research. Overall, the research can be characterised as quantitative, linked to natural phenomena and applied in nature. Some potential problems with this applied orientation are noted and the character and problems of commercial research are described.

For the 1992 year the estimated total level of funding received by social science researchers was \$538,150, half of which was obtained by the two social science departments. A number of factors make funding from FoRST an unlikely source of research funds. Publications data show that social science departments have fewer refereed publications per staff member but also have fewer staff with Ph.D.s and high student/staff ratios.

Researchers stated a number of problems in doing research, including lack of time and money. Lack of collegial support and the need to develop research skills with guidance from mentors or supervisors were also significant. There are four main problems with social science research, namely the need for: improved skills, more time for research, more funds for research and improved breadth and rigour of research.

## RESEARCH COMMITTEE RECOMMENDATIONS

- \* That Lincoln University review its hiring practices to make explicit the need for a Ph.D. degree, or equivalent, for academic appointments in the social sciences.
- \* That probationary appointments have research performance as a more explicit factor in evaluation for permanent positions.
- \* That relevant heads of departments be encouraged to implement a staff development programme that focuses on improving research skills, particularly for staff lacking those skills.
- \* That staff be encouraged and supported in taking regular conference leave both nationally and internationally.
- \* That opportunities for staff to take periods of special leave to complete higher degrees be further encouraged and supported.
- \* That communication with new staff be improved to clearly identify opportunities for 'seeding' research grants.
- \* That systems to measure research performance be further enhanced.
- \* Critically evaluate the teaching mission of the University and endeavour to reduce teaching contact hours.
- \* That the addition of new subjects to the curriculum coincident with new staff appointments be carefully reviewed with a 'research impact report'!
- \* That heads of departments be strongly encouraged to use the opportunities provided by the semester system to provide concentrated periods for research relatively free from teaching.
- \* That heads of departments be encouraged to use their flexibility in staffing budgets to provide research assistants but that the use of assistants be carefully monitored to ensure cost effectiveness.

- \* That Research Committee give explicit support towards social science research that develops integrative programme-based approaches.
- \* That the University explore the model for social science research as currently structured at the University of Waikato that encourages interdisciplinary research.
- \* That the University recognise the need for theoretical and applied research in the social sciences.
- \* That establishment of a Chair of Social Science be supported.
- \* That social science research focusing on rural issues, broadly defined, be given consideration for proactive support.

# CHAPTER 1

## INTRODUCTION

### 1.1 Overview

Social science is identified in Lincoln University's Charter as a key area of activity. With prospective academic developments in this area it is important that the University community gain an understanding of the scope and quality of current research activity so that future directions can be identified. As part of the continuous process of reviewing research programmes, the broad area of social science research was examined to assist in the formulation of recommendations for enhancing research productivity in this important area.

The terms of reference approved by the Lincoln University Research Committee (shown in the Appendix) call for a review of social science research that discusses the importance of such research to New Zealand and the role Lincoln University has to play in its development. These topics are covered later in this chapter along with a description of the method used and a brief discussion of definitions of social science. The review reports on the nature and scope of social science research, including its present organisation, the numbers of researchers, their national and international links, the types of research undertaken, funding and publishing characteristics. These topics are covered in Chapter 2. Finally, the review considers the significant problems facing social science researchers, provides a diagnosis of these problems and makes recommendations in Chapter 3.

### 1.2 Methods

The review began on Thursday 18 March 1993 and was completed on Monday 26 April 1993. Preliminary interviews with some members of the Research Committee helped to elaborate the issues. Definitions of social science were developed (see discussion below) and preliminary identification of social science researchers enabled initial interviews to proceed. Professor Ian Carter visited Lincoln University on Friday 2 April to participate in departmental meetings and meet with the heads of the departments of Economics and Marketing and Parks, Recreation and Tourism. After the first interviews the questions to be asked were finalised and nearly all researchers were interviewed by telephone or in person



to learn about their research. The data from these interviews were collated by department and used to develop the tables presented in this report. Some longer interviews were held with professors or heads of department to discuss the general issues relating to social science research. Data from other sources were also used to complement the interview data.

Some comparative dimensions are omitted from this research because of time constraints. For example, in describing the organisation of social science at Lincoln University it would have been useful to describe the organisation of social science at other universities. Similarly, in examining publication characteristics it would have been useful to compare these with other institutions or with social science publications in general.

### **1.3 Definitions**

Social science encompasses a number of disciplines. The phenomena studied include social interaction, society and culture (Theodorson, 1969), human relationships and society (Mitchell, 1968) or human affairs (Fairchild, 1944). These definitions share a common element of studying the forms of interactions between humans. The Encyclopedia Britannica succinctly encapsulates this idea and defines the social sciences as those disciplines which deal with human behaviour in its social and cultural aspects. However, there is no recognised 'unifying' discipline of social science.

The range of disciplines included in the social sciences is varied, in part because of the diverse character of human relations and in part because some disciplines (such as anthropology, geography and psychology) have non-social components. The following list shows social science disciplines considered in terms of the degree to which the discipline spans social and other phenomena, and includes less-commonly considered social sciences.

#### List of Social Science Disciplines

Wholly social science:

1. economics
2. political science
3. sociology

Partly social science:

4. anthropology (cultural)
5. geography (human)
6. psychology (social)

Less-commonly considered as social science:

7. comparative law
8. international relations.

Even this list is problematic because there are disciplines not listed which have social science components, for example, education and history. Disciplines such as agriculture and medicine, which are largely based on the study of biological phenomena, also inevitably include study of social aspects. Further, there are academic pursuits which have a substantive focus, such as leisure studies, information systems or farm management, which draw from all the social sciences in addition to the physical, biological, and computer sciences.

Providing a list of social science disciplines does not close the issue regarding definitions of social science research. For each discipline there are applied research activities which are essentially practical in nature. For example, in economics there is the practical application of economic principles in business and commerce. For sociology there are applications in social work and for psychology there are applications in counselling. At issue is whether these practical pursuits are social science in an academic sense.

Other applied research activities have social dimensions. For example, the astute business person studies human behaviour to achieve business objectives just as the thoughtful home executive studies human behaviour to achieve household objectives. However, in all these cases there are some non-scientific characteristics to the activity. First, the exercise of these kinds of 'research' is typically private in nature. The results are not published for a wider academic audience of other researchers interested in the study of these phenomenon nor are the results used to help other people. Second, this 'research' often proceeds without reference to a body of literature. When it does occur by drawing on literature there is little concern with making a contribution back to it. Research which is essentially private and not transferable or which is not informed by theory and method I define not as social science but

as social enquiry.

The tools of social science are widely used. They include (ordinary) activities like interviewing or observation. However, it is clear that merely using the tools of social science does not in itself constitute social science research. For example, the use of a survey instrument such as a questionnaire does not in itself define the activity as social science. Similarly, the study of human attitudes without being informed by issues of theory and method is not social science research. Study of attitudes without reference to theory would be equivalent to an animal scientist merely counting sheep. Additional criteria are therefore needed in deciding what is social science research. These are the use of a basic research question, awareness of theory, choice of relevant methods and design, and the potential to make results public. When these criteria are met and the phenomena being studied are social in nature then the research can be called primary social science research.

There is another type of research located between primary social science research and social enquiry. Some disciplines have components which acknowledge the role social factors play in the pursuit of the disciplines. For example, Natural Resources Engineering, Computing, Farm Management, Landscape Architecture, and Accounting and Valuation are all pursuits which involve humans, and research can be directed towards understanding relevant social factors. This activity can be referred to as secondary social science research. The main purpose of secondary social science research is to incorporate social factors into non-social disciplines and they seldom focuses on social phenomena per se. These activities typically do not in themselves advance our understanding of social phenomena or contribute to social science disciplines. In summary, it is possible to identify primary social science, secondary social science and social enquiry.

#### **1.4 Importance and Role of Social Science Research**

University research in New Zealand includes study of a wide range of physical, biological and social phenomena, and the study of arts and humanities. Social science research provides insight, understanding or interpretation of social phenomena and thus compliments research endeavours in the other areas. Social science research is an important part of the gamut of science and research in New Zealand which in itself is part of a broader

international intellectual activity. Beyond this though, New Zealand social science research provides a particular understanding of social processes unique to New Zealand, and for this reason is an important part of New Zealand culture. This importance has been recognised in recent reports to government (Probine Report, Beattie Report, Cartwright Report and the Steps Panel) where in each case there has been a recommendation that social science research funding be increased. Further, there is growing awareness that social processes are an important part of many spheres of activity, and researchers in the non-social sciences are giving increased attention to the social aspects of their particular areas. There is also increased interest in interdisciplinary research.

Lincoln University can play an important role in the development of social science in New Zealand through social science research of a general nature. Further, social science research at Lincoln can make a specific contribution by focusing on the social dimensions of the natural and physical environments. It can also contribute to research on rural society, including leisure studies, tourism and outdoor recreation.

## CHAPTER 2

### THE NATURE AND SCOPE OF SOCIAL SCIENCE RESEARCH AT LINCOLN UNIVERSITY

In this section of the report, social science research will be characterised in general terms including an account of the numbers of researchers, the types of research, funding, and publishing characteristics. First, the present organisation of social science research is briefly described.

#### 2.1 Social Science at Lincoln

Universities in New Zealand have developed to include departments in the sciences, humanities and the professions. In the social sciences there are typically departments of anthropology, economics, commerce, geography, history political science, psychology and sociology. There are some exceptions: the University of Otago does not have a department of sociology and the University of Canterbury does not have a department of anthropology.

Lincoln University has had an applied focus for most of its history stemming from its role in technology development and problem solving for primary production. Some social sciences were included in these early studies: these were rural development and extension, and applied agricultural economics. In recent years there has been growth in the social sciences as the degree programmes have broadened to include Commerce, Parks, Recreation and Tourism, Landscape Architecture, and Resource Management. Meanwhile agricultural economics has matured into economics and marketing.

The present organisation of social sciences at Lincoln University is reflected in the following classification of departments and service or research centres. This classification is not definitive but is useful in making sense of the variety of structures and activities at Lincoln University. Some departments do not easily fit this classification, for example, Natural Resources Engineering has elements of professional activity and scientific study.

**Table 1**  
**A Classification of Departments and Centres**  
**Giving an Indication of Social Science Researchers**

Natural Sciences

Animal and Veterinary Sciences Group	
Entomology (1)	
Horticulture (2)	
Plant Science	
Soil Science (1)	AEI
Wool Science (2)	PPRU

Professional

Natural Resources Engineering	
Accounting and Valuation (8)	
Farm Management (4)	
Landscape Architecture (7)	KFMU

Centres

Centre for Computing and Biometrics (2)	
Centre for Resource Management/Resource Studies (6)	
Education Centre (3)	
Centre for Maori Studies and Research (13)	

Social Science

Economics and Marketing (18)	AERU (4)
Parks, Recreation and Tourism (14)	

			FTE
Core potential departmental researchers	=	32	8
Full-time researchers AERU & CRM	=	6.5	<u>6.5</u>
			12.5
Secondary researchers in remaining centres and professional departments	=	<u>41</u> 79.5 (27% OF 298)	
Other researchers in natural science departments, occasional research activity	=	6	
Total departmental, centre and research unit staff	=	298	

Today, Lincoln University has a suite of departments which typically pursue natural science. There are four professional departments which teach a particular type of professional skill and which include the study of social aspects associated with the practice of their profession. There are four centres. The Centre for Computing and Biometrics focuses on computing and occasionally involves social science research. The three remaining centres have a major involvement in social science research applied to practical issues in resource management, education and Maori aspirations respectively. Finally, there are the two social science departments which deal more directly with social phenomena in the conduct of social science research.

## **2.2 Numbers of Researchers**

Table 1 shows the numbers of people doing social science research. The two social science departments had a total of 32 lecturing staff in 1992 which is 11 per cent of the total of 298 staff for all departments and research units (see Table 4 for further details on total staff numbers). The table also shows a total of 79.5 people with some involvement in social science research across all but the natural science departments. This total was 27 per cent of all staff. A general conclusion is that overall, and using a broad definition of social science, in 1992 about one quarter of Lincoln University departmental and research unit staff had some involvement in social science research.

Table 2 shows the data for masters and Ph.D. students based on Registry records which are a conservative estimate of graduate student numbers. Clearly, not all of these students will be involved totally in social science research. It is estimated that and about one half of the students in the professional departments do social science research. Using these estimations the adjusted total number of social science graduate students is 75.

**Table 2**  
**Number of Graduate Students (Masters & Ph.D.) Involved in**  
**Social Science Research, 1992**

	<u>Absolute</u>	<u>Adjusted</u>
Economics and Marketing	28	28
Parks, Recreation and Tourism	13	13
Centre for Computing and Biometrics	0	0
Centre for Resource Management, Resource Studies	4	4
Education Centre	1	1
Accounting and Valuation	8	4
Farm Management	4	2
Landscape	2	1
Natural Resources Engineering	18	2
Plant Science	1	1
Wool Science	<u>1</u>	<u>1</u>
TOTAL	80	57

Source: Registry records.

### 2.3 Types of Research

The type of social science research at Lincoln varies across departments and centres. First, we can consider the topics studied and types of theory used. Of the two departments, Parks, Recreation and Tourism draws on a wide range of theories (psychology, sociology, geography and political science, for example) and has diverse research in terms of approaches and emphases. Relevant theory from many disciplines is used in research which examines the phenomena of leisure, recreation and tourism which are social phenomena in themselves. For Economics and Marketing the theories used are narrower in scope but the range of topics studied is very broad (from international trade to managing diversity, for example).



The professional departments focus on topics within their own disciplines but draw on relevant social science theory and method. For example, in Farm Management there is research on farmers' perceptions of management, attitudes, computer use, and decision-making. In Landscape Architecture there is research on landscape perception and symbolism, gardens, heritage values and related cultural aspects. In Accounting there is research on finance theory, audit judgement, technology and small business.

The centres pursue varied types of social science research. The Centre for Maori Studies and Research is a new organisation beginning to develop research in a range of topics relating to Maori interests and resource issues. The Education Centre research focuses on learning issues and draws on relevant social science theory and method. The Centre for Resource Management undertakes applied social science research typically focusing on environment, resources, decision-making and policy, and draws on economics, political science, geography and sociology.

This overview of research shows that there is a range of research across departments and centres. In the social science departments and in most of the centres the research is typically primary social science while in the professional departments it is typically secondary social science research. In the natural science departments social research typically, but not exclusively, is related to technology adoption. It is applied in nature and addresses technical issues within the natural science discipline. It seldom recognises the social aspects of science and the broader social issues associated with technology adoption, and tends to see social science as a 'lubricant' to the diffusion process. From the interviews the level of awareness of social science theory and method appears highest in the social science departments and lowest in the natural science departments. Where the level of awareness of social science theory and method is low, there is greater chance that the research is social enquiry only. Critical awareness is used as a defining characteristic of social science research, rather than the use of particular methods themselves. With such awareness even mundane methods may be used effectively, provided the choice is consciously made. Where conventional methods are used and there is lack of appreciation of other methods then the activity is problematic as social science. An important aspect of this awareness is the recognition that there are diverse approaches to social science and vigorous debate among social scientists of the best way to pursue research. Further, awareness extends to a critical appraisal of the researcher's role in research.

The second important dimension to a review of research is the types of methods used, the phenomena studied and the balance between theoretical and applied research. Table 3 shows the relevant data.

The methods used by the social science researchers at Lincoln University can be classified as quantitative, qualitative (interpretative accounts of observations, interviews or written material) or both. The table shows that for the 62 researchers contacted 42 per cent typically use quantitative methods, and 34 per cent use both quantitative and qualitative methods. Twice as many researchers use quantitative methods only when compared to qualitative only, and it is likely that most of the researchers stating that they use both methods actually use quantitative methods. The type of method used is not consistent across the table: Parks, Recreation and Tourism, Landscape, the Education Centre and the Centre for Resource Management typically have qualitative methods while Economics and Marketing, Farm Management, and Accounting and Valuation typically have quantitative methods. In general, quantitative methods appear to dominate the practice of social science research at Lincoln. The well-developed movement in North America and Europe towards qualitative research in social science is only beginning to be recognised at Lincoln University, and it manifests in some departments and centres more than others.

The table also shows the phenomena studied. Where the research is social in nature but focused on or related to natural resources then the research was described as natural. Where it was social in nature with no direct link to natural resources it was described as social. This variable is roughly equivalent to a rural-urban distinction. The table shows that just over one half of social science research (55 per cent) at Lincoln has a natural focus.

The theoretical level of research is indicated by the applied/both/basic classification. Generally, the table shows that there is little basic (theoretically oriented) research and a predominance of applied research. Basic research occurs in Parks, Recreation and Tourism, Landscape Architecture and Accounting and Valuation. Finally, overseas contacts have been described by the researchers as good in most cases (44 per cent) or fair (41 per cent), with fewer (15 per cent) saying they were poor. The issue of links to other researchers will be discussed further in a later chapter.

Generally, the data presented here suggest strongly that the typical type of social science

research at Lincoln is quantitative, linked to natural phenomena, and is applied in nature. This characterisation fits with Lincoln's past approach to research in general, where the emphasis has been on practical applications of results to primary production or natural resource problems. In keeping with the applied emphasis the current social science research tends to address practical issues and uses social science theory and methods to inform the issues. The less orthodox qualitative research and/or basic research tends to occur in the more recently established departments of Parks, Recreation and Tourism and Landscape Architecture.

There are potential problems with this current set of emphases. First, the heritage of applied research can lead to an under-emphasis of theory. Such under-emphasis can lead to poorly thought out approaches and inadequate results. Further, the methods used may be chosen because they are familiar rather than appropriate. Second, the current set of emphases can result in secondary social science research where the results of research are used to inform other disciplines. Thus there is less emphasis on development of social science theory which is an indicator of primary social science. In raising these concerns I am noting that for social science research the role of theory is more significant than in natural science research.

The problems of applied research are illustrated well in the case of full-time, contracted social science research as occurs in the AERU and CRM. In these locations researchers face an accentuated set of problems. First, they are awkwardly located between academe and paying clients. The clients are sometimes sceptical of what university researchers can do for them, and they typically do not have a sound appreciation of the complexities of social science research. Second, they have little time between contract projects to write journal articles. Third, they spend growing amounts of time writing proposals to get funds and have no security regarding their future. Fourth, when funds are available they work under pressure to provide the report for the paying client who may take six months to decide to fund the research but wants the results two months after the decision is made to contract the research. Fifth, the small size of the commercial research units means that there are few colleagues available to ease the pressure when work intensity builds up. Finally, there are few research assistants available who have the diverse skills needed to help in the variety of research projects.

The peculiar problems of full-time contracted social science researchers are included here

because they illustrated well the effects of time constraints on research that is typically applied. Such research can be professionally conducted in terms of meeting client needs and contributing to problem solving or policy development, but it can be intellectually exploitative. These researchers have little time to read, reflect or participate in university life, such as attending seminars. They are not able to use their research to address issues of theory or method. Because they compete for funds against purely commercial researchers it is difficult to build any surplus into the budgets which could be used to support intellectual activity.

**Table 3**  
**Some Characteristics of Social Science Research**

	PRT	E & M		LA	FM	A & V	CMSR	Ed.C	CRM	CCB	Nat		Total	%
<b>Methods:</b>														
Quantitative	2	11		0	2	4		0	1	0	6		26	42
Both	7	5		1	1	2		1	2	1	1		21	34
Qualitative	<u>13</u>	<u>2</u>		<u>5</u>	<u>1</u>	<u>0</u>		<u>2</u>	<u>2</u>	<u>0</u>	<u>0</u>		<u>15</u>	24
	12	18		6	4	6		3	5	1	7		62	
<b>Phenomena:</b>														
Natural	4	15		2	4	0		0	5	0	4		34	55
Social	8	3		4	0	6		3	0	1	3		28	45
<b>Theoretical Level:</b>														
Applied	5	11		2	1	3		3	4	1	6		36	58
Both	4	7		3	3	2		0	1	0	1		21	34
Basic	3	0		1	0	1		0	0	0	0		5	8
<b>Overseas Contacts:</b>														
Poor	2	4		1	0			-	1	0	NA		( 6)	15
Fair	4	9		1	2			-	2	0	NA		(16)	41
Good	5	5		4	2			-	2	1	NA		<u>(17)</u>	44
													(39)	
<b>Funding Amount '92*:</b>														
Internal	29,500	16,900	Sum	1,800	21,000	5,200		0	8,000	7,000	6,250	Sum Others	139,850	26
External	<u>151,000</u>	<u>75,500</u>	46,400 33%	<u>46,000</u>	<u>75,000</u>	<u>7,500</u>		0	<u>80,000</u>	<u>0</u>	<u>7,500</u>	93,450 67%	<u>398,300</u>	74
	180,500	92,400	226,500 57%	47,800	96,000	12,900		0	88,000	7,000	13,750	265,250 49%	538,150	100
			272,900 51%											

\* Excludes salary costs of permanent staff.

## 2.4 Funding

Table 3 shows the level of both internal and external funding for the 1992 year by department or centre. These data may not be entirely accurate because the researchers gave a 'round figures' estimation for 1992 and in some cases not all funding received in 1992 would have been used in that year. However, these estimates give a reasonable estimation of the level of funding.

The total level of funding was \$538,150, nearly three quarters of which was external. This total was split nearly exactly in half between the two social science departments and the remainder. The external funds were attracted in large part by the two social science departments, while the remainder received a larger proportion of internal funds.

Sources of funds which might be available to researchers but which have not been fully utilised, as requested in the terms of reference, were not investigated in detail and this would require extending the enquiry beyond Lincoln, and this was beyond the financial scope of the exercise.

The potential for social science researchers at Lincoln University to obtain FoRST funds for social science research is very limited. The four FoRST output classes devoted to social science research have a total 1992/93 budget of \$1,570,000 of 1.0 per cent of the total FoRST budget. Programmes of research, which FoRST prefers, would swamp the budget for any one of social science the output classes. While funding for the social sciences is to increase the low absolute starting levels make any apparently large percentage increase very small in absolute terms. The proposed 1997/98 levels of funding have the four social science outputs as two per cent of the total FoRST budget. Not only are the funds for social science at low levels but they are not all contestable as CRIs have, to some degree, assured funding. Other problems hamper social science applications. Applications to other output classes are limited in potential success because the advisory committees are unfamiliar with social science research. Because of FoRST policy, social science researchers have limited access to the general University pool of funds. Further, while interdisciplinary collaboration between natural scientists and social scientists is promoted and supported, it is time consuming and can be problematic due to contrasting perspectives brought by researchers in

different disciplines. Finally, good social science research often is controversial and this is not compatible with the conservative approach required to avoid damaging referee comments.

Against these problems in obtaining FoRST funds for research are some positive considerations. First, the interdisciplinary approaches to social science research which would be likely to occur at Lincoln University matches better the output class system used by FoRST compared to departmentally based applications. Second, land-based research topics feature significantly in FoRST priorities. Third, social science research is cheap in natural science terms. There is potential for joint applications between social scientists and natural scientists to non social science output classes where there can be a reduction in unit cost per class. This type of application must include social science as a fundamental part of the research project.

## **2.5 Publishing Characteristics**

Departmental and publications data were examined in detail and the important features are presented in Table 4. The data refer to publications in 1991 which were taken from the 1993 Lincoln University Calendar. These data are used because they are readily available for all departments. They are relevant to one year only and cannot be taken to indicate the general pattern of any one department over time. The table shows the total publications per staff member and the ratios are broadly similar across the departments and centres. The natural science departments have the highest ratio (2.01), followed by the professional departments (1.87) and social science departments (1.36). The total refereed publications per staff column shows a significant drop for all departments and centres, with the largest drop for the professional departments. The natural science departments have the highest ratio (1.00), followed by the social science departments (0.30) and professional (0.28). Thus the natural science departments produce three times the number of refereed publications per staff member compared to the social science departments. However, if the number of refereed publications with only one or two authors only is considered the ratio for natural science departments halves but there is minimal effect on the social science departments. Using these adjusted data the ratio for all the natural science departments is 0.48 compared to 0.27 for the social science departments and 0.44 for Economics and Marketing in particular.

One significant feature of the table may be that the proportions of staff in the natural science departments with Ph.D. qualifications is significantly higher than all other departments. For the former departments as a whole the proportion of staff with Ph.D. qualifications is 0.49 while for the professional departments it is 0.14, and the centres and social science departments both have 0.34. Further, the student/staff ratios for the natural science departments are less than half that for the centres and the social science departments. Clearly, there are indications that Ph.D. qualifications and low student/staff ratios are associated with a higher output of refereed publications. However, direct comparisons must be treated with caution because if EFTSs are earned efficiently by teaching large classes, the perceived disparity across the University may be rather less. Of importance also may well be a developing culture of teaching being a priority particularly in newly emerging and rapidly expanding departments. By contrast natural science departments have long-established research programmes which would contribute significantly to publication output.

Some important warnings are necessary about comparing publications across departments. This comparison assumes that refereed publications in different disciplines are the same thing. This assumption is not valid. Social science journals are diverse and the journal rejection rate is high. These factors make it harder to get research published. Further, a case can be made that the criterion of merit associated with refereed publication is not relevant to some social science research where the intent and purpose of the research is to reach a broad lay audience.

Bearing these considerations in mind we can conclude, tentatively, that the social science departments have not published as much refereed material as the natural sciences and this is contributed to, in part, by the fact that they have lower proportions of staff with Ph.D.s. and high student/staff ratios.



**Table 4**  
**Departmental Characteristics and Publishing Characteristics**

	Number of Staff (1992)	Number with Ph.D. (1992)	Proportion with Ph.D. (1992)	Student/ Staff Ratio (1991)	Total Publications/ Staff	Total Refereed/ Staff	Total Refereed/ Staff ≤ 2 Authors
<b>NATURAL SCIENCES</b>							
Animal & Veterinary Sciences Group, inc. Biochemistry & Microbiology	30	18	0.60	8.16	3.03	1.60	0.87
Entomology	12	7	0.58	10.88	1.42	0.33	0.25
Plant Science	28	15	0.54	11.53	1.32	1.04	0.61
Soil Science	16	11	0.69	10.69	3.13	1.38	0.25
Wool Science	8	1	0.13	9.55	0.88	0.00	0.00
Horticulture	17	5	0.29	6.41	1.24	0.47	0.18
<b>Subtotal</b>	<b>111</b>	<b>57</b>	<b>0.51</b>	<b>Av. = 9.54</b>	<b>2.01</b>	<b>1.00</b>	<b>0.48</b>
<b>PROFESSIONAL</b>							
Natural Resources Engineering	17	6	0.35	9.33	0.76	0.29	0.24
Accounting and Valuation	19	1	0.05	20.47	3.37	0.42	0.42
Farm Management	16	4	0.25	11.55	1.63	0.25	0.19
Landscape Architecture	8	1	0.13	11.02	1.13	0.00	0.00
<b>Subtotal</b>	<b>60</b>	<b>12</b>	<b>0.20</b>	<b>Av. = 13.09</b>	<b>1.87</b>	<b>0.28</b>	<b>0.25</b>
<b>CENTRES</b>							
Centre for Computing & Biometrics	22	7	0.32	20.65	0.14	0.05	0.05
Centre for Resource Mgmt, Resource Studies	13	6	0.45	-	1.92	0.23	0.23
Education Centre	3	0	0.00	-	1.00	0.00	0.00
<b>Subtotal</b>	<b>38</b>	<b>13</b>	<b>0.34</b>	<b>Av. = 20.65</b>	<b>0.82</b>	<b>0.11</b>	<b>0.11</b>
<b>SOCIAL SCIENCES</b>							
Economics & Marketing	25	9	0.36	23.68	1.52	0.48	0.44
Parks, Recreation & Tourism	19	6	0.32	19.55	1.16	0.05	0.05
<b>Subtotal</b>	<b>44</b>	<b>15</b>	<b>0.34</b>	<b>Av. = 21.62</b>	<b>1.36</b>	<b>0.30</b>	<b>0.27</b>
<b>TOTAL</b>	<b>253</b>	<b>97</b>	<b>0.38</b>	<b>Av. = 13.34</b>	<b>1.68</b>	<b>0.57</b>	<b>0.33</b>
(AERU + NZAEI + PPRU + KFMU + CMSR) =	<u>45</u>						
Total - Departmental & Research Unit =	298						

## Summary

There are two social science departments and three centres directly involved in social science research at Lincoln University, and three professional departments informed by social science research.

About one quarter of staff and an estimated total of 57 masters and Ph.D. graduate students at Lincoln University have some involvement with social science research at Lincoln University.

Two departments and most centres typically undertake primary social science research drawing on social science disciplines to study a range of social phenomena. The professional departments, one centre and some natural science departments undertake secondary social science research. Overall, the research can be characterised as quantitative, linked to natural phenomena and applied in nature. Some potential problems with this applied orientation are noted, and the character and problems of commercial research are described.

For the 1992 year the estimated total level of funding received by social science researchers was \$538,150, half of which was obtained by the two social science departments. A number of factors make funding from FoRST an unlikely source of research funds. Publications data show that social science departments have fewer refereed publications per staff member but also have fewer staff with Ph.D.s and high student/staff ratios.

## CHAPTER 3

### PROBLEMS AND RECOMMENDATIONS

#### 3.1 Perceived Problems

All researchers contacted were asked to state what problems, if any, were associated with the conduct of their research. The problems identified fall into three groups (Table 5). The first group relates to resources (time and money) needed to do research. Together, problems associated with lack of time and money amounted to 57 items, or 53 per cent of all perceived problems. Within this group pressure on time was a particularly frequent item amounting to 37 per cent of all problems. Specifically, there was both lack of time and lack of unbroken time. Funding problems included general issues like lack of money or not knowing how to apply for funds. Problems with internal funding typically referred to the problem of obtaining funds for personnel from Research Committee. Problems with external funding referred to the time involved and dissatisfaction with FoRST funding procedures.

The second group of problems relates to researchers themselves and their need for collegial support in their research, or in developing their skills and confidence. This group amounted to 27 per cent of all perceived problems and exceeds funding problems which by itself accounts for 16 per cent of all problems. Sixteen per cent of all problems related to lack of colleagues, either within Lincoln University (ten per cent) or within New Zealand (six per cent), while 11 per cent related to lack of skills or lack of guidance. Clearly, this second group of problems is entirely compatible with the observation that many of the personnel in departments doing primary or secondary social science research are presently working on their own Masters or Ph.D. research. Of the total 78 lecturing staff doing social science research there are four (five per cent) doing Masters research and 14 (18 per cent) doing Ph.D. research. Further, isolation experienced by some researchers is consistent with the data on overseas contacts presented earlier. Fifty-six per cent of researchers stated that their overseas contacts were poor or fair, the remainder stating that their contacts were good. Clearly, there is a division between established researchers who have travelled and made useful overseas contacts, and those more recently appointed or less experienced researchers who have few overseas contacts and few in New Zealand.

**Table 5**  
**Perceived Problems**

	PRT	E & M	LA	FM	A & V	CMSR	Ed.C	CRM	CCB	Nat	Total	%	
<b>Time:</b>													
Lack of time (teaching, admin.supervision)	8	6	2	3	2		2	2	0	2	25	23	
Lack of unbroken time	6	5	2	1	1		0	0	0	0	<u>15</u>	<u>14</u>	
											Subtotal	40 37	
<b>Funding:</b>													
General (lack, how apply, for basic research)	4	2	1	1	0		0	1	0	0	10	9	
Internal (for personnel)	1	0	1	1	0		0	0	0	1	4	4	
External (time involved, FORST)	1	0	0	0	0		0	2	0	0	<u>3</u>	<u>3</u>	
											Subtotal	17 16	
<b>Lack of Colleagues, isolation:</b>													
At Lincoln	2	2	0	0	2		1	1	1	2	11	10	
In New Zealand	0	2	0	1	2		1	0	1	0	7	6	
Developing own skills, confidence	0	1	2	0	3		1	0	0	1	8	7	
Lack of guidance, mentors, supervisors	0	1	0	0	2		0	0	0	1	<u>4</u>	<u>4</u>	
											Subtotal	30 27	
<b>Library materials, resources limited</b>	2	1	0	0	0		0	1	0	0	4	4	
Lack of research assistants	1	1	0	1	0		0	0	0	0	3	3	
Lack of recognition	0	1	0	0	0		1	1	0	1	4	4	
Getting data	0	1	0	0	1		0	0	0	1	3	3	
Other	4	0	0	1	0		0	0	0	0	<u>8</u>	<u>7</u>	
											Subtotal	22 20	
											<b>Total</b>	<b>109</b>	<b>100</b>

The third group of problems is a set of five minor categories which together constitute 20 per cent of all problems. Some researchers found that the library materials or resources were limited for their area, although there was wide acknowledgement that the library had made an excellent response to changing requirements in recent years. Other minor problems include lack of research assistants and lack of recognition. The latter typically refers to difficulties in having non-social science researchers appreciate the full gamut of possibilities in social science research. Finally, some researchers report that data is not always available from corporatised departments or businesses.

### **3.2 Diagnosis of Problems**

The rapid recent development of social science research at Lincoln University has led to a number of problems. These manifest in rapidly growing departments, which is the case for both Economics and Marketing and for Parks, Recreation and Tourism. Expanding departments have a considerable burden associated with developing and reviewing new courses and this takes time away from research. Further, these departments having a high proportion of younger staff and the need to meet immediate undergraduate teaching demands has meant that there are high proportions without Ph.D. qualifications (see Table 4). A number of consequences for social science research flow from this structure. First, the lack of advanced qualifications makes the practice of research difficult because these lecturers have not always undertaken intense or demanding research experiences. Second, the lecturers who do have experience with research have a relatively greater burden of supervision which can distract from their own research. Third, the newer recruits are less familiar with colleagues at Lincoln or in New Zealand so they feel isolated. Fourth, with new recruits arriving in quick succession there are inbuilt problems for the future in coordinating study leave.

Other structural factors are at work at Lincoln University that significantly impinge on social science research. There is a high teaching load compared with other universities. Further, this load is spread over most of the academic year so that there is only a short summer period available for uninterrupted research. Organising teaching to occur largely in only one semester is not always possible nor pursued with vigour in some departments. The shortage of time is particularly significant for social science research because typically, but not

exclusively, social science research is labour and time intensive, with little recourse to labour saving technology.

These structural factors affect the conduct of social science research. Many of the perceived problems noted in the above section are good illustrations of the manifestation of impacts of this structure, and their presence lends support to the diagnosis of problems noted here. Thus there is a high degree of congruence between perceived problems and the structural factors contributing to these problems. This is significant for identifying solutions to the problems (see below).

The historical precedent at Lincoln has been for high levels of student contact and considerable involvement of staff in teaching instrumental skills (how to do things). This stems from the emphasis on the practical rather than the theoretical, which manifests in the focus on applied research. While an applied research focus is in itself not problematic, over-emphasis can be problematic, especially when it leads to structures and practices that limit research. At issue here is the concept of the university and Lincoln's commitment to university ideals of using research to inform teaching.

The applied character of social science research at Lincoln has been identified earlier in the discussion of types of social research. This means that research typically is oriented to solving problems rather than making a contribution to social science disciplines. Applied research does not necessarily have to remain applied and can, in principle, link back to a discipline and theory in general. The potential problems of applied research identified earlier become significant problems when there are time and financial pressures as researchers, which the interview data clearly show. The need for basic research and thorough-going applied research informed by theory is important because these characteristics materially affect the quality of social science research. If quality social science research is a major objective of a university then the practice of research must demonstrate theoretical and methodological rigour and full awareness of the issues involved in research. This requirement is most important for social science research.

Finally, an obvious problem for social science research is its presently imbalanced nature. There is strong representation from economics but the other social sciences of anthropology, sociology, political science, geography and psychology are present in rudimentary form only.

Fully developed social science research at a University needs to draw from a variety of social science disciplines.

In sum there are four main problems associated with social science research, expressed in the following needs for:

1. Improvement in research skills
2. More time for research
3. More funds for research
4. Improved breadth and rigour of research.

### **3.3 Recommendations**

The identification of the main problems suggests the following recommendations, which may well apply to all researchers at Lincoln University, not just the social scientists. To improve research skills it is recommended that Lincoln University:

1. Develop an improved staff development programme that caters specifically for skill development
2. Provide study leave for newly appointed staff wanting to take graduate level courses to develop their Ph.D. thesis research
3. Provide additional conference leave support for a greater number of conferences per year
4. Continue to seek staff with fully developed research skills
5. Consider providing one-off research grants (about \$20,000) for newly appointed staff to develop their own research programmes.

To be able to provide more time for research it is recommended that Lincoln University:

1. Critically evaluate the teaching mission of the university and reduce teaching contact hours
2. Reduce the length of the teaching year

3. Insure flexibility in the semester system to allow effective loading of one semester
4. Provide a number of permanent research assistants
5. Consider providing a larger mid-year break to allow researchers to take conference leave in the northern hemisphere summer.

To provide more research funds it is recommended that Lincoln University initiate or continue the:

1. Recognition that social science research requires funds for personnel, travel and data rather than technical equipment
2. Representation of social science research in any dealings with FoRST in particular to address the imbalances in the current funding structure
3. Recognition that funding for basic research is an essential requirement of high quality research of any type.

To improve the breadth and rigour of research it is recommended that Lincoln University:

1. Continue to develop social science teaching programmes and departments
2. Continue to consolidate University status.

Establishing a Department of Social Science and Humanities would materially benefit the development of rigorous social science research at Lincoln University. Such a department would:

1. Improve student awareness of social science in general and in social science research in particular
2. Provide a reference point for other Lincoln University staff and help them in their social science research
3. Help to improve general awareness of the breadth of research activity already occurring at Lincoln and, consequently, help improve the chances of receiving funding for social science research
4. Foster social science research in general by providing a reference point and collegial support for the current researchers
5. In the longer term provide postgraduate students who can help departmental and



research unit researchers with their research.

The department should be structured in such a way as to insure that research would be an important part of its activities.

### **3.4 Future Prospects**

The present situation for social science research is one of change and development. Much of the data presented in this review is limited to one particular year and fails to show ongoing change. It is possible that, to some extent, the present momentum of change will lead to some improvements in future. However, given the present set of structures at Lincoln and the fairly coherent set of perceived problems, the chances of improvement in social science research are poor if the specific needs are ignored. Without attention being paid to these needs the likely short to medium-term future for social science research is bleak. The stresses on departments and personnel will continue. Talented researchers will seek better positions elsewhere and be lost to Lincoln. Without a policy aimed at improving research the present problems and character of research will remain and Lincoln University will lose initiative in the area of social science research.

Despite the problems, there are a number of factors which augur well for social science research at Lincoln University. First, our small size, in principle, encourages interaction between departments and this can foster good quality research. Second, there is a growing critical mass of researchers. Third, there is opportunity for social science research to contribute to scientific endeavour and help identify Lincoln University with quality research on natural resource and rural issues which is well represented by all relevant disciplines.

#### **Summary**

**Researchers stated a number of problems in doing research, including lack of time and money. Lack of collegial support and the need to develop research skills with guidance from mentors or supervisors were also significant. There are four main problems with social science research namely the need for: improved research skills, more time for research, more funds for research, and improved breadth and rigour of research.**

## REVISED RECOMMENDATIONS

Following presentation of this report through a public seminar, and identification of key issues, the problems were addressed by the Research Committee and recommendations formulated for consideration by the Vice Chancellor.

Many of the recommendations have a generic application to much of Lincoln University's research activity and should be considered by the Vice Chancellor in that light. Research Committee remains concerned about the general level of research productivity but several peculiarities with respect to social science research have been identified.

Given the problems identified in this report, the following is a commentary and recommendations:

### A. IMPROVEMENT IN RESEARCH SKILLS

We must recognise that rapid growth in student numbers, and consequentially in staffing, has put pressure on some departments to recruit staff at lower qualifications than desirable. The Committee is of the view that wherever possible staff should be recruited at the Ph.D. level, this being the best indicator of likely research productivity.

#### Recommendation

- (1) **That Lincoln University review its hiring practices to make explicit the need for a Ph.D. degree, or the equivalent research experience, for academic appointments in the social sciences.**

Appointment of staff with demonstrable research skills is not sufficient in itself. Further development of research in newly appointed staff can be encouraged by more explicit use of research output as a key measure in determining performance during probationary periods.

### Recommendation

- (2) **That probationary appointments have research performance as a more explicit factor in evaluation for permanent positions.**

Existing staff, particularly those with less developed research skills, require a proactive staff development programme particularly for factors such as lack of skills, confidence and overseas contacts. It is clear that social scientists do need opportunities for extensive interaction and debate to advance in their disciplines.

### Recommendations

3. **That relevant heads of departments be encouraged to implement a staff development programme that focuses on improving research skills, particularly for staff lacking those skills.**
4. **That staff be encouraged and supported in taking regular conference leave both nationally and internationally.**
5. **That opportunities for staff to take periods of special leave to complete higher degrees be further encouraged and supported.**

Newly appointed staff often lack the contacts, skills and experience to attract research funding. There is explicit support for new staff in internal funding but these opportunities may not be well known.

### Recommendation

6. **That communication with new staff be improved to clearly identify opportunities for 'seeding' research grants.**

Consequential to providing funding is the need to perform in meeting agreed objectives with respect to project completion and publication. Further funding may well become contingent on performance. Likewise promotion is likely to be

increasingly dependent on research productivity.

#### Recommendation

7. **That systems to measure research performance be further enhanced.**

#### B. TIME FOR RESEARCH

Provision of 'quality time' for research is an almost universal problem in both social and natural sciences. This issue was clearly identified in the accompanying report with respect to social science research. During its growth phase, Lincoln University has concentrated on the provision of teaching. As we mature, our role as a University will become more dependent on our research reputation. This will be exacerbated in the newer and emerging areas such as the social sciences where our tradition and heritage may not be so well identified. With increased staff and a 'maturing' of discipline areas, the University must endeavour to use existing mechanisms, such as semesters, to make significant blocks of time available for staff to reach agreed research objectives.

#### Recommendations

8. **Critically evaluate the teaching mission of the University and endeavour to reduce teaching contact hours.**
9. **That the addition of new subjects to the curriculum coincident with new staff appointments be carefully reviewed with a 'research impact report'.**
10. **That heads of departments be strongly encouraged to use the opportunities provided by the semester system to provide concentrated periods for research relatively free from teaching.**

#### C. RESOURCES

The review recognises that the nature of social science research is personnel rather

than capital dependent. In this, however, it is not dissimilar to much applied research characteristic of Lincoln University. Changing management practices are permitting heads of departments more opportunities for flexible use of funds to support research, particularly in provision of research assistants. In welcoming this move, the Committee was also mindful of the need for staff in the social sciences to become accustomed to the use of assistants in their research. Through a lack of resources, and sometimes an individual approach, staff may not be able to use assistance in a cost effective manner. Any additional resources should be managed in such a way that allows for a gradual induction in the use of research assistants.

#### Recommendation

- 11. That heads of departments be encouraged to use their flexibility in staffing budgets to provide research assistants but that the use of assistants be carefully monitored to ensure cost effectiveness.**

In contrast to many of the natural sciences, social scientists have tended to work as individual researchers. There is little heritage of integrative social science programmes in this area at Lincoln, or indeed, in New Zealand. Given that new funding regimes encourage collaborative programme-based funding, we must provide incentives for social scientists to work together towards common goals. The Committee recognises the inherent tension within the social sciences where theory may be more contentious than the natural sciences. Nevertheless, there are significant opportunities in developing a common ethos.

#### Recommendation

- 12. That the University explore the model for social science research as currently structured at the University of Waikato that encourages interdisciplinary research.**

The need for vigorous theoretical debate in the social sciences was strongly expressed. A theoretical base to research is necessary for wide acceptance within the area. To retain credibility the University must endeavour to achieve a balance

between theoretical and applied research in the social sciences.

Recommendation

13. **That the University recognise the need for theoretical and applied research in the social sciences.**

D. RIGOUR OF RESEARCH

Rigour and credibility of research is dependent on leadership and peer acceptance. There is considerable debate as to whether or not such leadership can be demonstrated within the current departmental structure or by establishing a new department. The Committee was not prepared to enter debate on academic structure but recognised the need to develop university-wide leadership in the social sciences, particularly if proposed academic developments in the social sciences proceed. The Committee also recognises the need for a greater breadth in the social sciences.

Recommendation

14. **That establishment of a Chair of Social Science be supported.**

E. FUTURE PROSPECTS

The report clearly demonstrates that the social sciences have a key role at Lincoln University. The prospect for further expansion is good. If a critical mass of quality researchers in the social sciences is to be attracted and retained, the issues identified in this report and the consequential recommendations must be carefully considered. In developing the social sciences in the current environment, the University runs the risk of insufficient focus in key areas given the disparate nature of staffing expertise and interests. The rural heritage and natural resource use focus should not be ignored. There is a perception that research on rural needs may have been reduced in significance. There appears to be a considerable niche for research into rural issues.

Recommendation

15. **That social science research focusing on rural issues, broadly defined, be given consideration for proactive support.**

## APPENDIX 1

### LINCOLN UNIVERSITY SOCIAL SCIENCE RESEARCH REVIEW

#### TERMS OF REFERENCE

The review should examine, evaluate and report on the following:

1. The importance of social science research to New Zealand and the role Lincoln University has to play in its development.
2. The nature and scope of social science research that has, and is being done at Lincoln University. This should include a description and discussion of:
  - the social science researchers in the University.
  - the methodologies and theoretical perspectives being used to guide their research.
  - the organisation of social science at Lincoln University relative to other New Zealand universities.
  - the nature of the current and potential national and international links with Lincoln University social scientists.
3. The balance of theoretical and applied social research at Lincoln University; why that balance exists and the appropriateness of that balance.
4. Social science research funding to date (internal and external). Attention should also be paid to sources of funds which might be available to Lincoln University social science researchers but have not been fully utilized.
5. The ways in which Lincoln University social science researchers are disseminating their research findings.
6. The significant problems facing Lincoln University social science researchers and recommended remedies.
7. The likely short to medium term future for Lincoln University social science research.

#### Process

The Review Sub-Committee should be guided by the above and report to the Research Committee at its November meeting. The Committee would like to receive a brief written report including recommendations for action. It would be most useful if the contents of the report could be presented at a 50 minute seminar (open to all interested staff) before the Committee meeting. The reviewers will then meet with the Research Committee to discuss the details of their findings and recommendations.