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1996

# Quality appraisal of higher education research: an action-oriented, process-based alternative to performance indicators

Susanne J. Curtis

*University of Wollongong*

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**QUALITY APPRAISAL OF HIGHER EDUCATION RESEARCH:  
AN ACTION-ORIENTED, PROCESS-BASED ALTERNATIVE TO  
PERFORMANCE INDICATORS**



**A thesis submitted in fulfilment of the  
requirements for the award of the degree of**

**Doctor of Philosophy**

**from**

**The University of Wollongong**

**by**

**Susanne J. Curtis, B.Ed., M.Stud.Ed.**

**Centre for Research Policy  
1996**



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## ABBREVIATIONS

ABS	Australian Bureau of Statistics
ALR	Australian Left Review
ANU	Australian National University
ARC	Australian Research Council
ASTEC	Australian Science and Technology Council
CASMAC	Core Australian Specification for Management and Administrative Computing System
CCGI	Commonwealth Competitive Grants Index
CRC	Co-operative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTEC	Commonwealth Tertiary Education Commission
DEET	Department of Employment, Education and Training
DITAC	Department of Industry Trade and Commerce
DVC	Deputy Vice Chancellor
EIP	Evaluations and Investigations Program
HES	Higher Education Supplement
NBEET	National Board of Employment, Education and Training
NCGI	National Competitive Grants Index
NH&MRC	National Health & Medical Research Council
NUDist	Non-numerical Unstructured Data indexing, searching and theorising
OECD	Organisation for Economic Co-operation and Development
PCT	Personal Construct Theory
PDCA	Plan, Do, Think, Act
PhD	Doctor of Philosophy
PI	Performance Indicators
PVC	Pro-Vice Chancellor
R&D	Research and Development
RFM	Relative Funding Model
RGC	Research Grants Committee
RMU	Research Management Unit
SSM	Soft Systems Methodology
STEP	Science Technology and Economic Policy
TQM	Total Quality Management
UNS	Unified National System
VC	Vice Chancellor

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## ABSTRACT

The policy themes currently steering Australian higher education research practice, have given rise to an output-oriented, performance-based, quality appraisal framework that is oriented towards narrowly conceived accountability purposes. Because it is so narrowly conceived, this framework is both inadequate for quality appraisal purposes and insufficient for legitimating and rewarding research practice. The thesis argues that with this appraisal framework, both the physical and cognitive infrastructures that sustain research activity are being put at risk. This is because performance-based measures cannot recognise or reward the processes that secure, sustain and renew flexibility and responsiveness in research pursuits.

The thesis proposes that process-oriented indicators based on effective action for research, could provide an alternative but complementary appraisal option for legitimisation and reward of the full range of activities involved in quality research practice. However, a quality appraisal tool that could accommodate the full range of activity for research would necessarily have to incorporate processes for making explicit what it is that researchers experience as effective action for research. In developing such a tool, this thesis contributes towards the provision of an alternative theoretical and methodological framework for quality appraisal practices that are congruent with, and grounded in, effective action for research.

## FOREWORD

This PhD study has been undertaken in the context of a broader research program. The broader program is one that is driven by the researcher's long-standing interest in action that facilitates learning, and hence identity-formation. It is this interest that also motivates the present inquiry.

Human understanding and identity-formation are made possible by the action involved in attributing meaning and value to experience.<sup>1,2</sup> In questions of value, and the attribution of merit and worth to everyday activities, it is human understanding as 'mechanism', that is of interest to the present study. The infinite adaptability of this 'mechanism' has led inquirers in the naturalistic paradigms<sup>3</sup> of social inquiry, to speak in terms of human-as-instrument.<sup>4</sup> While human-as-instrument is a powerful mechanism for enhancing reason and action,<sup>5</sup> it can function just as effectively as a means of controlling action through the institutionalisation of ways of knowing and acting.<sup>6</sup> As Berger and Luckman note, '... man<sub>h</sub> is capable paradoxically of producing a reality that denies him'.<sup>7</sup> The potential for institutionalisation of action in the form of systems of legitimation and reward, to deny the intended meaning in everyday practice, is the focus of the first strand of the present

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<sup>1</sup> Bruner, J. S. & Anglin, J. M. (1973) *Beyond the Information Given : Studies in the Psychology of Knowing*, George Allen & Unwin, London, pp.xx-38.

<sup>2</sup> Schutz, A. (1972) *The Phenomenology of the Social World*, trans. George Walsh and Frederick Lehnert, Heinemann Educational Books, London, Ch.2.

<sup>3</sup> Guba, E.G. & Lincoln, Y. S. (1989) *Fourth Generation Evaluation*, Sage, Newbury Park, California p.84.

<sup>4</sup> Guba, E. G. & Lincoln, Y.S. (1981) *Effective Evaluation : Improving the Usefulness of Evaluation Results Through Responsive and Naturalistic Approaches*, Jossey-Bass, San Francisco, Ch. 6.

<sup>5</sup> Guba, E.G. & Lincoln, Y.S. (1989), op. cit., pp.174-177.

<sup>6</sup> Agyris, C., Putnam, R. & McLean Smith, D. (1985) *Action Science : Concepts, Methods, and Skills for Research and Intervention*, Jossey-Bass, San Francisco, pp.88-96.

<sup>7</sup> Berger, P. L. & Luckman, T. (1966) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*, Allen Lane, London, pp.107-108.

study. The sustainability of spheres of social life can be undermined if the values inherent in broader, institutionalised systems of legitimation and reward are privileged over those that facilitate everyday practice. It is the inadequacy of institutionalised action, for the coordination of social systems,<sup>8</sup> in the form of system-level, legitimation and reward of higher education research, therefore, that is a primary concern which motivates the present study.

Legitimation and reward systems can affirm the value of action for everyday practice, and in so doing, facilitate the formation of personal identity within a sphere of social life<sup>9</sup> such as research. However, if they fail to affirm important aspects of a sphere of social life that are necessary for its sustainability and renewal, legitimation and reward systems can also serve to deny the value of action and undermine identity formation.

Spheres of social life are maintained through the intentional action of individuals, who structure their lives from the perspective of a particular life view, or values framework.<sup>10</sup> The meaning and value of individual social action is, therefore, to a large extent, also predetermined by its historical context and the institutionalised structures of previous social action which serve sustainability and renewal.<sup>11</sup> Institutionalisation of spheres of social life<sup>12</sup> can be seen in particular and recognisable forms of language, activities and social relations.<sup>13</sup> Language becomes institutionalised as it takes on specific forms for everyday purposes in specific contexts. Activities are institutionalised in accepted daily practice. Patterns of social relations are institutionalised in the form of organisations.

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<sup>8</sup> McTaggart, R. (1991) *Action Research: A Short Modern History*, Deakin University Press, Geelong, pp.85-86.

<sup>9</sup> Habermas, J. (1987) *The Theory of Communicative Action, Volume Two: The Critique of Functionalist Reason*, trans. Thomas McCarthy, Polity Press, Cambridge, pp.181-185.

<sup>10</sup> Ibid., p.142.

<sup>11</sup> Bernstein, R.J. (1983) *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis*, Basil Blackwell Publisher Limited, Oxford, p.142.

<sup>12</sup> McTaggart, R. (1991) op. cit., p.83.

<sup>13</sup> Kemmis, S. & McTaggart, R. (eds) (1988) *The Action Research Planner*, Deakin University Press, Geelong, p.82.



Research, by its nature, has institutionalised contestation of accepted ways of understanding and acting which are embedded in existing forms of knowledge, institutions and social practices. If contestation is absent, there can be no dialectical shaping of the meaning and value of action as circumstances change.<sup>14</sup> In this sense, contestation is essential to research as a sphere of social life. Without contestation of established knowledge, the flexibility, and therefore sustainability, of meaning-making structures could be put at risk.<sup>15</sup>

The contradiction between institutionalisation and contestation is the mechanism by which continued interaction between old and emerging, more effective new ways of understanding and valuing action, are sustained. Whatever the sphere of social life, the dialectical interaction between contestation and institutionalisation is the process by which growth in knowledge about the value of action for intended purposes and sustainability of the meaning of social roles in everyday practice, are possible. Kemmis and McTaggart use the metaphor of the ocean shore to explain the nature of this dialectical interaction.

. . . contestation and institutionalisation are opposed in interaction like the wave motion and the movement of the tides that shapes a shoreline; contestation is the wave action, institutionalisation the changing land form, bearing the history of the sea's action and shaping the possibilities for future action. They are mutually constitutive aspects of the historical processes of social formation.<sup>16</sup>

At a substantive level, the present study focuses on activities which shape the value of action for research, as a form of social life. The focus for exploring this shaping process is the action that facilitates or constrains higher education research practice. This focus has been selected because it serves to contrast the type of action which sustains and renews research as a sphere of social life, with that which constrains or undermines research practice, by legitimising and rewarding ineffective action. In the present study,

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<sup>14</sup> Ibid., p.82.

<sup>15</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. & Held, D. (eds.) (1982) *Habermas: Critical Debates*, Macmillan Press Ltd., London, pp. 279-281.

<sup>16</sup> Kemmis, S. & McTaggart, R. (eds.) (1988) op. cit., p.40.

the building of a framework and methodological tool based on enhancing continually, understanding about facilitative action for research, serves to demonstrate what is missing from institutionalised, system-level, legitimation and reward systems for research in higher education. In the process, the study both develops and refines an alternative legitimation and reward option for valuing higher education research, that has the potential to sustain a healthy dialectic between contestation and institutionalisation of action in knowledge-generating communities.

## CHAPTER 1

### INTRODUCTION AND OVERVIEW

The core argument of this thesis is that because current higher education research legitimisation and reward systems fail to acknowledge important aspects of research practice, they are inadequate for quality appraisal purposes. The aim of the study is to develop a quality appraisal process which balances the current bias towards output-oriented, performance-based criteria for what is valued in higher education research. The study employs a collaborative, action researching approach,<sup>1</sup> in a four-phase inquiry process, involving five different research groups, in a single institution, over a two year period. An action researching study is one in which inquiry participants seek to create a social space where the evolution of practical action is both supported and facilitated.<sup>2</sup> An action researching approach is employed in the present study for the development of a quality appraisal tool, which will enable participants to objectify their subjective claims<sup>3</sup> about effective action for research. The interpretive categories generated through the dialogue processes of the study, provide the framework for an enhanced system of quality appraisal for higher education research.

In effect, the thesis emerges from the *process* because it is the inquiry process itself which, by illuminating the 'invisible' aspects of research practice, generates a process-oriented, action-focused, quality appraisal tool. The tool is shown to be grounded in, and therefore affirmative of, the value of everyday action for research. In the study, therefore, it is knowledge of the value of action for everyday practice which serves as the

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- 1 Kemmis, S. (1990) 'Improving Education Through Action Research' in *Action Research Change and Development*, Zuber-Skerritt, O. (ed.) Centre For Advancement of Teaching and Learning, Griffith University, Brisbane, Ch. 4.
  - 2 Altrichter, H. (1990) 'Defining, Confining or Refining Action Research' in *Action Research Change and Development*, Zuber-Skerritt, O. (ed.), Centre For Advancement of Teaching and Learning, Griffith University, Brisbane, p.15.
  - 3 Habermas, J. (1984) *The Theory of Communicative Action, Volume One: Reason and The Rationalization of Society*, trans. Thomas McCarthy, Heinemann, London, pp.xiv-xv.

standard for critical review. The focus of this critical review is the efficacy of the collaboratively-developed, quality appraisal tool for higher education research practice.

The following schematic overview of the theisis summarises diagrammatically, the structure within which the inquiry and its outcomes are presented.

*Schematic Overview of Thesis*

	STRAND 1	STRAND 2	STRAND 3
Chapter 1	The nature of the problem		
Chapter 2	The restructuring of higher education		
Chapter 3	The institutional response		
Chapter 4	The quality challenge		
	Chapter 5	Introducing methodology & focus of inquiry	
	Chapter 6	Metatheoretical framework	
	Chapter 7	Implications and limitations of metatheory for inquiry purposes	
	Chapter 8	Methodological options for implementing framework	
	Chapter 9	The emergent design in practice	
		Chapter 10	Phases 1 & 2 outcomes - a framework grounded in the meaning of action for research
		Chapter 11	Phase 3 outcomes - a methodological tool grounded in the value of action for research
		Chapter 12	Phase 4 outcomes - the efficacy of process-oriented, quality appraisal practice for higher education research
		Conclusion	What the thesis has achieved

These three mutually-shaping strands of the inquiry contributed to the development of an alternative framework and methodological tool for quality appraisal. The strands therefore, also form the major sections of the thesis document. The first strand is described in Chapters 1 - 4. These chapters provide a critical review of current research

policy themes as they relate to frameworks for legitimation and reward, their antecedents, their intent, the purposes served and the response of stakeholders within the system of higher education.

These four chapters, together, establish the need for generating an alternative quality appraisal framework for higher education research and foreshadow the way in which this may be achieved. Chapter 1 outlines the issues that define the thematic concern<sup>4</sup> of the inquiry and a rationale for the development of an alternative, but complementary quality appraisal framework for higher education research. Chapter 2 explains why the Government's theory-of-action for higher education, embodied as it is in the Dawkins policy initiatives,<sup>5,6</sup> has created structures for legitimation and reward that are inappropriate for higher education research. The institutional response to the funding arrangements in the new structures is the focus of Chapter 3. This chapter demonstrates how manipulation of the funding mechanisms inherent in the new legitimation and reward structures, has resulted in a distortion of the meaning of research merit at the level of the institution. Chapter 4 illustrates how the rhetoric of the decade of quality was used to further strengthen the performance-based appraisal practices of the new structures, as 'measures' of research quality. In effect, quality measures provided an additional lever with which to shift the locus of responsibility for institutional reorientation from institutional administrators to all members of academic communities.

The second strand of the thesis, which includes Chapters 5 - 9, both explores and develops the theoretical and methodological bases of an alternative framework for quality appraisal practices. Because this is an action researching study, the building of an alternative framework was reciprocally shaped by fieldwork activities. In order to emphasise this reciprocal shaping, Chapter 5 describes the outcomes of preliminary

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<sup>4</sup> Kemmis, S. & McTaggart, R. (1988) op. cit., p.9.

<sup>5</sup> Dawkins, J. S. (1988) *Higher Education: A Policy Statement*, AGPS, Canberra.

<sup>6</sup> Dawkins, J. S. (1989) *Research for Australia: Higher Education's Contribution*, AGPS, Canberra.

reconnaissance activities which provided the original direction and focus for the study and by way of descriptive profiles, introduces the participants who took part in the reflective inquiry processes. By articulating how the thematic concern for the study was framed, how and why participants became involved in the study and the ways in which the inquiry focus was refined over time, this chapter serves to map out the environment of research practice within which the present study is grounded.

Chapter 6 offers an introductory explanation as to why action theory, in the form of Habermas' social philosophy,<sup>7,8</sup> provides an appropriate metatheoretical underpinning for the study. Action theory is discussed as a powerful explanatory framework in the form of hermeneutic<sup>9</sup> and critical hermeneutic<sup>10,11</sup> inquiry practices which are used to identify the meaning and value of action. Chapter 7 explores the implications of Habermas' action theory framework for the present inquiry, demonstrating both the potential of action theory for analysing claims about the meaning and value of action, and the limitations of this theory at the level of inquiry practice. Chapter 8 addresses the need for practical methodological tools for inquiry purposes. It is these tools, discussed in Chapter 8, that provide the basis for development of an alternative option for quality appraisal of higher education research. The tools which are discussed all deal in some way with second-order learning or metalearning about effective action for research. They include; action researching principles,<sup>12</sup> concepts underpinning organisational learning,<sup>13</sup> the central philosophical assumption and eleven corollaries of Personal Construct

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7 See Habermas, J. (1984) op. cit.

8 See Habermas, J. (1987) op. cit.

9 Geertz, C., 'From The Native's Point of View' quoted in Bernstein, R. J. (1983) op. cit. p.133.

10 Habermas, J. (1971a) *Knowledge and Human Interests*, trans. Jeremy J. Shapiro, Beacon Press, Boston, pp.197-203.

11 McCarthy, T. (1978) *The Critical Theory of Jürgen Habermas*, Polity Press, Cambridge, pp. 303 - 310.

12 See Kemmis, S. & McTaggart, R. (1988) op. cit.

13 See Agyris, C. (1992) *On Organizational Learning*, Blackwell, Cambridge.

Psychology,<sup>14</sup> the mapping of action epistemologically, as systems of human action in Soft Systems Analysis<sup>15,16</sup> and the process-oriented focus of Total Quality Management.<sup>17</sup>

The practical experiential knowledge generated in the initial reconnaissance activities, the emerging theoretical framework and the methodological principles are brought together in the form of the emergent design which is described in Chapter 9. Chapter 9 explains, in retrospect, the sequence of reflective inquiry processes which made up the emergent design of the study. This chapter provides both an overview and a retrospective, detailed analysis of the four phase process involved in the development of an alternative quality appraisal framework. Each phase of the emergent design is explained in terms of the activities involved, the data generated, the data analyses which took place, the credibility and dependability measures used<sup>18</sup> and the progress that was made in the development of a quality appraisal tool.

The third strand, which includes Chapters 10, 11 and 12, describes the tool in the making by providing examples of the type of information generated as participants made explicit what they experienced as effective action for research. Chapter 10 is a case report<sup>19</sup> of the outcomes of the first two phases of the emergent design. These outcomes are made explicit in order to demonstrate that the generic action categories which constituted the developing, action-oriented framework, were generated from everyday research practice.

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<sup>14</sup> Bannister, D. & Fransella, F. (1986) *Inquiring Man: The Theory of Personal Constructs*, Third Edition, Croom Helm, Beckenham, Kent.

<sup>15</sup> See Checkland, P. & Scholes, J. (1990) *Soft Systems Methodology in Action*, John Wiley and Sons, Chichester, England.

<sup>16</sup> Fiol, M. C. & Huff, A. S. (1992) 'Maps For Managers: Where Are We? Where Do We Go From Here?' *Journal of Management Studies*, vol.29, no.3, May, p.277.

<sup>17</sup> See Imai, M. (1986) *Kaizen: The Key to Japan's Competitive Success*, Random House Business Division, New York.

<sup>18</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., Chapter 8.

<sup>19</sup> Ibid., p.174.

This chapter also provides evidence as to the why purely practical reflection<sup>20</sup> of Phases 1 and 2, was insufficient for the development of the proposed quality appraisal tool. Chapter 11 explains how, by exploiting the potential of critical reflective practice,<sup>21</sup> the challenge to develop a higher degree of sophistication in quality appraisal of research was met. In this study, critical reflective action was the means by which the quality appraisal tool was both defined and refined in practice, providing in the process, information for the construction of quality research environment profiles based on the value of action for research.

The linked quantitative and qualitative profiles which were the outcomes of Phase 3 described in Chapter 11, illustrate how it is possible to design a quality appraisal tool that condenses rather than replaces the meaning and value of action for research. The examples provided demonstrate that a quality appraisal tool based on critical reflection, can reveal the metalearning which both underpins and sustains researching capability. The way in which the appraisal tool was refined through successive levels of aggregation, illustrates that it is possible for research stakeholders to indicate both what they understand as effective action for research and how these understandings can be used to discriminate between effective and ineffective action.

In any action researching inquiry, the inquiry itself is also subjected to critical reflective appraisal. It is this final Phase 4 process of the emergent design, described in Chapter 12, that demonstrates the efficacy of the appraisal framework and methodological tool for quality appraisal of higher education research practice. This metaevaluation process is what is described by the Higher Education Council as second order evaluation.<sup>22</sup> This

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20 Smyth, W.J. (1986) *Educational Leadership in Schools: Reflection-in-Action*, Deakin University Press, Geelong, pp.18-19.

21 Ibid.

22 Higher Education Council of the National Board of Employment, Education and Training (1992c) *Higher Education: Achieving Quality*, AGPS, Canberra, pp. 82-83.



chapter provides the outcomes of second-order evaluation activities used in the emergent design. The strengths and shortcomings of the appraisal tool in action are revealed through the voices of the participants. Taken together, the outcomes of Chapters 10, 11 and 12 serve to demonstrate the efficacy of an alternative framework that is congruent with the everyday activities of research, for quality appraisal of the full range of activities involved in quality research practice.

The Conclusion reviews why it was necessary to develop an alternative framework and methodological tool for quality appraisal of higher education research, what the thesis has achieved in redressing the inadequacies of current appraisal frameworks and why this is a beginning rather than an end to the inquiry process.

Prior to introducing the content of the thesis in this introductory chapter, however, it is important to note that the study examines and reports on the understandings of participants. The information contained in this thesis remains the property of those who contributed to the growth in knowledge about effective action for research and the refining of the appraisal tool. For this reason, the anonymity of both the institution and the participants is central to the ethics of the study, so it is *understandings* that are shared in the body of the thesis and in the results, not the identities of those involved.

### **Introducing the Quality Dilemma - Where the Sum of the Parts is Less Than The Whole**

The present study proposes that in Australia, because of the limitations inherent in the Government's framing of quality research, current quality appraisal practices are inadequate for legitimisation and reward of higher education research activity. This chapter outlines how quality appraisal frameworks fail to account for aspects of research practice that ensure sustainability, flexibility and renewal of higher education research. In so doing, the study takes up the challenge set by David Dill from the University of North

Carolina, whose interest is in research environments and the activities that are engaged in and rewarded, in higher education research. The challenge he sets<sup>23</sup> is to develop a framework for quality appraisal that provides an alternative to output-oriented, performance-based systems of quality appraisal for higher education research.

. . . the challenge is to empower the collegial mechanisms of the knowledge professionals to improve academic quality and hold them responsible for deciding how quality will be measured, and how resulting data will be continually used for quality improvement.<sup>24</sup>

In seeking to meet this challenge, the following key questions emerged as the inquiry progressed.

1. Why are current appraisal frameworks inadequate for quality appraisal of higher education research?
2. Why does action theory provide an appropriate theoretical framework for both the critiquing of current appraisal practices and the development of an alternative but complementary quality appraisal framework?
3. How would quality appraisal tools be designed if they were to be congruent with higher education research as a sphere of social life?
4. How could the type of information generated using an action theory framework, provide an alternative but complementary quality appraisal system for higher education research?

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<sup>23</sup> Dill, D.D. (1992) 'Quality by Design: Toward a Framework for Academic Quality Management', *Higher Education: Handbook of Theory and Research*, vol. VIII, Agathon Press, New York, p.72.

<sup>24</sup> Ibid.

## Higher Education Research Quality - The Problem to be Addressed

In 1988, the then Federal Minister for Employment, Education and Training, John Dawkins, stated explicitly in the White Paper on Higher Education (hereafter known as the Dawkins White Paper),<sup>25</sup> that ‘much more can and must be done’ to improve the social and economic utility of the Higher Education research effort. The dominant theme of the Dawkins White Paper was evidenced in the intention of Government to promote greater responsiveness of the higher education research effort. Dawkins stated unambiguously, that ‘. . . increasing emphasis must now be placed on strategic basic research; that is, basic research in areas that hold potential for major developments or applications across a range of fields.’<sup>26</sup> The ‘measure’ for accountability of higher education research in the 1980s and 1990s, according to the Dawkins White Paper, was to be the responsiveness<sup>27</sup> of the research effort to changing national needs. It is the ‘measures’ which have been adopted for appraisal of the research effort, as a result of implementation of the principles outlined in the Dawkins White Paper, that give rise to the major concern for the present study. The concern is that the push for accountability of higher education research pursuits is significantly affecting the efficacy of quality appraisal frameworks for research practice. The present study demonstrates, firstly, why current appraisal practices are inadequate for quality appraisal of higher education research and secondly, through a collaborative inquiry process, the type of quality appraisal framework that is necessary to redress the inadequacies of the Dawkins policy initiatives.

Marginson, Senior Research Fellow in the Centre for the Study of Higher Education at the University of Melbourne observed, that with the Dawkins initiatives;

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<sup>25</sup> Dawkins, J. S. (1988) op. cit., p.90.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid., p.11.

[t]he government had invested economic objectives with the authority of national needs, and had placed these needs in the forefront without the usual gestures towards the “traditional mission” of universities.<sup>28</sup>

By framing the government’s expectations of higher education research in this way, the Dawkins policy statements of 1988<sup>29</sup> and 1989<sup>30</sup> created a context in which extrinsic interests, particularly those of an economic nature, were afforded precedence. ‘Interest’, in this sense, is the satisfaction an individual or group connects with the idea of accomplishing what they intended for an object or an action.<sup>31</sup> So it is the *idea* of utilising higher education research activity as a resource for social and economic development<sup>32</sup> that is currently privileged in terms of stakeholders’ interests. It is also this *idea* which underpins the structure of current legitimisation and reward frameworks for higher education research.

In higher education, stakeholders and respective stakeholder interests are many and varied. The stakeholder concept is discussed in this first chapter because it characterises the reframing by government policy in the 1980s and early 1990s, of purposes to be served by higher education. According to the definition adopted by the Higher Education Council (HEC),<sup>33</sup> the advisory body of the National Board of Employment, Education and Training (NBEET), stakeholders include all those groups who have a legitimate interest in the outcomes of university processes. The HEC believes that ‘stakeholder’ is an appropriate term to describe the social relationships between the university system, and the range of different interest groups within society, whose expectations for higher

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<sup>28</sup> Marginson, S. (1993) *Education and Public Policy in Australia*, Cambridge University Press, Cambridge, p.123.

<sup>29</sup> Dawkins, J. S. (1988) op. cit.

<sup>30</sup> Dawkins, J. S. (1989) op. cit.

<sup>31</sup> Habermas, J. (1971a) op. cit., p.198.

<sup>32</sup> Organisation for Economic Cooperation and Development (OECD) (1986) quoted in Marginson, S. (1993) op. cit, p.48.

<sup>33</sup> Higher Education Council (1992c) op. cit., p.9.

education research need to be met. Higher education stakeholders include; academic staff, students, administrators, employers, governments, the community generally, professional associations, and the international research and scholarly community.<sup>34</sup> Quoting Westerheijden's presentation on peer review at the Hong Kong Council for Academic Accreditation Conference, the HEC proposed that a stakeholder, can 'best be defined as one who has a legitimate interest in the outcome of a process, and because of that interest, a role in ensuring that the outcome is of the order expected.'<sup>35</sup> In this sense, stakeholders are individuals or groups 'who have concomitant rights and obligations.'<sup>36</sup>

The social philosopher Habermas, in his text, '*Moral Consciousness and Communicative Action*', explained how rights and obligations represent the reciprocity inherent in social relations. When members of a group play out their social roles, they know that as members of the group they are, '... *entitled* to expect certain actions from others in given situations and at the same time [are] *obliged* to fulfill the justified behaviour expectations of others ...'.<sup>37</sup> Higher education stakeholders' *obligations* are internally related to their expectations of higher education processes. These expectations determine the standards by which respective stakeholding groups in turn, define what constitutes quality outcomes from universities. The current government policy focus on the social and economic utility of research means that researchers' obligations, as key stakeholders in the research enterprise, are placed in the background of policy expectations. Researchers' obligations are to sustainability and renewal of knowledge-generating resources. Researchers' interests and obligations relate to their core capacity to

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<sup>34</sup> Ibid.

<sup>13</sup> Westerheijden, D. F. (1991) 'Promises, Problems and Pitfalls of Peer Review: The Use of Peer Review in External Quality Assessment in Higher Education', Paper presented to the Hong Kong Council for Academic Accreditation International Conference, July, p.3.

<sup>36</sup> Higher Education Council (1992c) op. cit., p.9.

<sup>37</sup> Habermas, J. (1990) *Moral Consciousness and Communicative Action*, trans. Christian Lenhardt and Shierry Weber Nicholsen, Polity Press, Cambridge, p.155.

‘transform experience in both its objective and subjective forms’.<sup>38</sup> It is this core capacity that is valued by research practitioners, because it ensures the self-sustainability and self-renewal that underpin the capacity for responsiveness in research pursuits.

Research, in the form of disciplined inquiry, is, in essence, a learning activity no matter what the field of study. Disciplined inquiry, whether it be in the sciences, humanities or social sciences, can be similarly disadvantaged if recognition and reward systems fail to support essential aspects of learning processes. Kolb, a proponent of experiential learning theory, proposed in his explanation of the nature of learning that ‘Learning is a process whereby knowledge is created through the transformation of experience.’<sup>39</sup> His definition emphasises the *process* of adaptation and learning, as opposed to *content* and *outcomes*. Adaptation is highlighted in the transformational nature of the learning process, where knowledge is continually created and recreated. It is through this process that learning ‘transforms experience in both its objective and subjective forms.’<sup>40</sup> However, this type of transformational, process-oriented information is absent from current reward and legitimisation criteria for quality research.

The understanding that researchers develop about the most effective ways of going about their innovative activity, is the basis of their capability for self-sustainability and self-renewal in a continually changing world of knowledge. It is legitimisation and reward of this type of understanding, or process knowledge, that is missing from quality appraisal frameworks. These are important omissions, because as Becher<sup>41</sup> has demonstrated in his research into academic cultures, the self-sustainability and self-renewal of researching capability are highly dependent upon the provision of appropriate recognition and reward

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<sup>38</sup> Kolb, D. A. (1984) *Experiential Learning: Experience as The Source of Learning and Development*, Prentice-Hall, Englewood Cliffs, New Jersey, p.38.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Becher, T., (1989) *Academic Tribes and territories: Intellectual enquiry and the cultures of disciplines*, SRHE and Open University Press, Milton Keynes, USA, pp. 169-170.

systems. Becher was convinced that, ‘too forceful a super-imposition of the extrinsic values of accountability and relevance on the intrinsic values of reputation-seeking and quality control by peer group judgment can only lead to intellectual subservience, and thence to academic sterility.’<sup>42</sup> He also cautioned, that if knowledge is ‘. . . viewed as a cultural resource, [this resource] demands good husbandry and steady replenishment.’<sup>43</sup>

### **Higher Education Research Quality - the Horns of a Dilemma**

The way in which accountability is currently framed by government policy means that higher education research is in danger of having, as Becher<sup>44</sup> observed, its more marketable assets stripped. It is in this sense that the capacity of higher education researchers to fulfill their obligations to self-sustainability and self-renewal has been put at risk, because of the government’s over-emphasis on extrinsic values of utility and accountability. It is appropriate, however, that the activities researchers engage in should be economically and socially accountable. Habermas noted in his discussions on *Democratization of the University*<sup>45</sup> in the late 1960s, through instruction, supply of qualified graduates, and research (production of knowledge), universities are ‘immediately connected with functions of the economic process’ and therefore have an obligation with respect to economic interests. However, the capacity of researchers to fulfill this obligation is predicated on their meeting their primary obligation towards the continual transformation and development of researching capabilities.

Bergquist, a Deputy Vice Chancellor Research, confirmed the potential risk for government and researchers alike, when utility of higher education research predominates

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<sup>42</sup> Ibid., p.169.

<sup>43</sup> Ibid.

<sup>44</sup> Becher, T. (1989) op. cit., p. 170.

<sup>45</sup> Habermas, J. (1971b) *Toward a Rational Society: Student Protest, Science, and Politics*, trans. Jeremy J. Shapiro, Heinemann, London, pp.1-3.

as the accountability standard.<sup>46</sup> Bergquist, in critiquing New Zealand's higher education policy, observed that over-zealous emphasis by government, on the practical outcomes of research, undermined required responsiveness and relevance. He explained, that researchers;

... must be able to rely on intuition and have the capacity to move quickly in new directions, otherwise responsiveness will have been eradicated as it has in the present New Zealand research structure, as dramatically demonstrated by the country's inability to mount a research response to the recent toxic algal bloom crisis ...<sup>47</sup>

Hill and Turpin,<sup>48</sup> from the Centre for Research Policy at the University of Wollongong, indicated in their comments on the new science and technology policy agenda, that this position is also one which has been experienced in Britain. They quote Williams, a former Labour MP and Secretary of State of Education and Science who says, '[t]hose who want to harness the universities to commercial objectives may destroy the very qualities they admire in them - intellectual excellence, free inquiry, scientific imagination.'<sup>49</sup> Arguments such as these point to the possible erosion of the capacity of higher education researchers to remain flexible and responsive to changing economic and social needs. It may be argued, therefore, that the very processes which serve to sustain and renew the researching capacities valued by government, cannot be recognised or rewarded with output-oriented, performance-based utility criteria as the measure of accountability.

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<sup>46</sup> Bergquist, P. (1994) 'The economic value of useless research', *Campus Review Special Report*, Oct. 27 - Nov. 2, pp 12-13.

<sup>47</sup> Ibid., p.13.

<sup>48</sup> Hill, S. & Turpin, T. (1992) 'Cultures in Collision: The Changing Face of Research Culture and the New Science and Technology Policy Agenda', Paper presented to the 4S/EASST Joint Conference on Science, Technology and "Development", Gothenberg Sweden, August 12-15, p.5.

<sup>49</sup> Ibid.



The Australian Vice-Chancellors' Committee (AVCC) confirmed the risks inherent in accountability-focused legitimization criteria for higher education when it observed that;

[t]oo much emphasis on immediate and measurable outcomes can only belittle and demean the worth of the university endeavor which is intended to have an abiding effect on individuals' lives and society itself over a long period of time. . . there is a real danger that the imposition of . . . uniform reporting standards would act to . . . rigidify practices to a degree where necessary flexibility and response to changing needs was threatened.<sup>50</sup>

This is not to deny the importance of 'immediate and measurable outcomes', but to emphasise the inherent shortcomings of judging the merit and worth of research activity within the confines of utility and economic accountability. Marginson proposed that a broader perspective was necessary because the objectives of higher education 'are more than simply economic, and that economic policies must take into account their effects on those other objectives.'<sup>51</sup>

In the current reward and legitimization systems for higher education research, the merit and worth or quality of research activity are judged by performance standards framed primarily in terms of economy, effectiveness and efficiency.<sup>52</sup> These standards have emerged as the cornerstone of 'public sector reform prevailing in Australia and many other OECD [Organisation for Economic Co-operation and Development] countries'.<sup>53</sup> Meek, of the University of New England, acting as Guest feature editor for the Universities Review, observed that in this reform agenda, 'effectiveness' in higher education is framed as the flexibility and responsiveness of institutions to client needs and

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<sup>50</sup> Australian Vice Chancellors' Committee (1992a) 'Quality in the Australian University System' in Higher Education Council, National Board of Employment, Education and Training, *The Quality of Higher Education: Discussion Papers*, February, AGPS, Canberra, pp.65-82.

<sup>51</sup> Marginson, S. (1993) op. cit., p.126.

<sup>52</sup> Dawkins, J. S. (1988) op. cit., pp.4 and 86-87.

<sup>53</sup> Meek, V. L. (1995) 'Introduction: Regulatory frameworks, market competition and the governance and management of higher education', *Australian Universities' Review*, vol. 38 1995, no.1, p.4.

demands. Furthermore, in an era of accountability and economic restraint, 'efficiency' is demonstrated in a shift from state to consumer control with cost-effective and better managed institutions.

In the reform agenda, there is little attention to process information that could serve the interests of those who have an obligation to maintain and enhance researching capabilities. In the current policy context, output-oriented, performance-based indicators, such as number and value of research grants, average publication rate, productivity rate of original works and consultancy rate,<sup>54</sup> are given privileged status. What researchers do in order to achieve these outcomes is not reducible to such measures. This thesis argues that it is what researchers do, the processes that they engage in and the circumstances they create to facilitate effective action for research, that needs to be recognised and valued in appraisal practices if the government's expectations of university research are to be met. If processes and circumstances essential to effective action for research are not recognised as legitimate components of quality appraisal, then they cannot be rewarded. If they are not rewarded they cannot, in the current climate of fiscal restraint and accountability demands,<sup>55</sup> be sustained.

## **Finding a Common Ground for Resolving the Quality Appraisal Dilemma**

Utility is the theme that motivates a strong interest in output-oriented, performance-based indicators. The criteria by which 'utility' may be judged, however, can be framed quite

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<sup>54</sup> Commonwealth Department of Employment, Education and Training (1991) R.D. Linke (Chair) *Performance Indicators in Higher Education: Volume 1, Report and Recommendations* (Linke Report), AGPS, Canberra, ACT, pp.xxi -xxiii.

<sup>55</sup> Marceau, J. (1993) *Steering From a Distance: International Trends in the Financing and Governance of Higher Education*, Report to the Higher Education Division of the Department of Employment, Education and Training, Evaluations and Investigations Program, AGPS, Canberra, p.2.

differently according to the interests of the different stakeholders<sup>56</sup> concerned. Perspectives on what is valued, and therefore, what constitutes quality outcomes, can vary according to respective stakeholders' interests. Guba and Lincoln, researchers in qualitative evaluation methodologies, have proposed in their discussion of stakeholder interests that;

[b]oth the nature and the size of the stakes may vary considerably from one group to another. Stakes may be counted in terms of money, status, power, face, opportunity, or other coin, and may be large or small, as constructed by the groups in question.<sup>57</sup>

In other words, the interests of the group concerned frame the standards by which they would choose to judge the quality of processes and outcomes. Stakeholding groups, according to Guba and Lincoln,<sup>58</sup> can differ not only in terms of their interests but also with respect to their level of influence over which standards are used to judge the merit and worth of their activities. As a result, the reward and legitimation systems established by the powerful groups in society may favour or privilege the processes and outcomes valued by their respective groups. The activities of other groups, who have a different set of standards, may be put at risk because their efforts cannot be acknowledged or recognised within the frameworks established by those who have greater power to influence what is valued.

This thesis proposes that although researchers are disadvantaged by the new accountability structures emerging in higher education, they need not be without a voice in shaping legitimation and reward systems. The call for 'accountability' and increased transparency of processes in higher education has presented an opportunity for

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<sup>56</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., p.51.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

researchers to provide information regarding the efficacy of the government's expectations for research, at the level of research practice. The Australian HEC set the scene for researchers to take up this opportunity by supporting the Dawkins position with respect to improved transparency of university processes for accountability purposes.<sup>59</sup> The HEC advised that universities should be able to communicate what they do and how they and their stakeholders can know they do it well. The HEC stated that, '... if we know what the universities do and how and why they do it, we can begin to show that changes are improvements rather than just change.'<sup>60</sup> Public demonstration by universities of how they manage their processes in order to produce quality outcomes, is seen by the HEC as crucial to accountability. Further, the transparency of methods for evaluating performance and achievements is also seen by the HEC as very important in judging the value of higher education. The HEC's position is founded on the key question, '... what is it that universities do, and how do we (the community) and they (the university) know they do it well?'<sup>61</sup> In other words, the provision of information which improves the transparency of university management processes is considered, by the HEC, to be the first step towards understanding the value of higher education research activities. It is also the point at which *synergies* between the government expectations and obligations for research connect with those of the researchers themselves. This thesis argues that improved transparency of the processes necessary for effective practice, could provide the common ground on which accountability, adaptation and transformation of research practice would be better served by quality appraisal practices.

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<sup>59</sup> Higher Education Council of the National Board of Employment Education and Training (1992b) *The Quality of Higher Education: Draft Advice to the Minister*, AGPS, Canberra, p.7.

<sup>60</sup> Ibid.

<sup>61</sup> Higher Education Council of the National Board of Employment Education and Training (1992c) *op. cit.*, p.6.

## Bringing the Invisible Product into Focus - Quality Appraisal of the Research 'Whole'

According to the Dawkins White Paper, the social functions of higher education research are to enhance knowledge, develop creative capabilities and facilitate innovation,<sup>62</sup> so that social and economic benefits accrue to the nation. It is primarily the interests of government that are served by an output-oriented focus on accrued benefits to the nation, so from the government perspective, research 'output' represents what is valued in higher education research. However, from the perspective of research practitioners, both their interests and their obligations lie in assuring the quality of processes for enhancing knowledge, developing creative capabilities and facilitating innovation.

As discussed previously, research by its very nature, is a learning activity. However, it is a second level of learning or *metalearning*<sup>63</sup> which provides the type of research outcomes that are directly relevant to the interests of researchers themselves. These interests, explains Bawden,<sup>64</sup> who has explored and refined the concept of organisations as critical action researching systems, concern how researchers can act more effectively to continually improve researching capabilities.

All learning . . . involves two sets of experience and theories: there is the "first order" issue relating to the situation we are exploring, and there is the "second order" issue relating to the way we are inquiring into the "first order" issue. We must find out; find out about finding out; take action to improve the situation, and take action to improve our action taking!<sup>65</sup>

For researchers, this second order learning or *metalearning* involves the development of enhanced understanding about how and why the daily activities that they are engaged in

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<sup>62</sup> Dawkins, J. S. (1988) op. cit., p.89.

<sup>63</sup> See Bawden, R. (1990) 'Towards Action Researching Systems', in Zuber-Skerritt, O. (ed.) (1990) *Action Research For Change and Development*, Centre For The Advancement of Teaching and Learning, Griffith University, Brisbane, Ch.2.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid., p. 34.

are effective and productive. Metalearning also provides a deeper understanding about how successful their chosen practices are in serving their intended purposes. However, metalearning characteristically occurs in the form of practical knowledge or knowing-in-action<sup>66</sup> which remains tacit<sup>67</sup> and generally unexamined by practitioners. Tacit knowledge is the type of practical understanding<sup>68</sup> and practical reasoning<sup>69</sup> that is both learned through, and guides, everyday action. While metalearning remains tacit, it cannot be considered as legitimate evidence that higher education researchers are accountable to their stakeholders. In its tacit form, metalearning is the ‘invisible product’<sup>70</sup> of higher education research. In a preliminary review of research findings for the present study the author proposed that:

[t]he invisible products of higher education research activities are enhanced learning environments. These constitute the key contribution of higher education to development of creative and innovative resources, and the ‘value-added’ component of higher education research. When higher education researchers also fail to value their ‘invisible product’, this weakens their ability to generate appraisal frameworks which could balance the current bias . . . [towards quantifiable output performance indicators].<sup>71</sup>

While the ‘first order’ learning of the researcher may result in quantifiable research output, it is metalearning that underpins quality research. Agyris and Schön, researchers

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<sup>66</sup> Schön, D.A. (1983) *The Reflective Practitioner: How professionals think in action*, Basic Books Inc., New York, pp. 50-59 & 138.

<sup>67</sup> Polanyi, M. (1958) *Personal Knowledge: Towards a Post-Critical Philosophy*, Routledge & Kegan Paul, London, pp.55-58 & 60-61.

<sup>68</sup> Schön, D.A. (1983) op. cit., pp. 50-59 & 138.

<sup>69</sup> Polkinghorne, D. (1983) ‘Human Action’ in *Methodology for the human sciences: systems of inquiry*, State University of New York Press, Albany, p.171.

<sup>70</sup> Berry, L.L. (1993) Seminar on Total Service Quality, Department of Management, University of Wollongong, 18 March.

<sup>71</sup> Curtis, S. (1994) ‘When Organisations For Learning Need to Become Learning Organisations: Potential Frameworks for Quality Management in Higher Education’, *Journal of Institutional Research in Australia*, vol.3, no.1, May, p.43.

in the field of organisational learning,<sup>72</sup> foreshadowed the position taken by Bawden.<sup>73</sup> They explained how reflective inquiry into the effectiveness of practical understanding or theories-in-use, provides the substantive data required for judging the quality of practice and in the case of research, everyday research pursuits. These tacit theories-in-use, which guide effective practice, are the invisible products of research, the metalearning that is not accounted for in current quality appraisal frameworks. If the interests of researchers are to be represented adequately, therefore, in quality appraisal practices, it is the researchers themselves, and not the government alone, who have an obligation to influence the criteria for quality research standards.

Questions concerning the criteria by which the ‘best’ researchers<sup>74</sup> are to be judged, and the nature of ‘the best return’<sup>75</sup> for publicly funded research, are central questions for the universities and government. In current higher education appraisal practices, framed as they are by the Dawkins White Paper, quantifiable, performance-based indicators<sup>76</sup> do serve an important public accountability purpose. Government requires performance-based indicators as a more effective system of accountability for research performance<sup>77</sup> and is pursuing the identification and increased use of performance indicators as a means of quality appraisal. However, it is not only the broader political and economic interests that need to be represented in accountability frameworks. Judgements concerning the effectiveness of action are relevant to all stakeholders. In particular, such judgements need to reflect the interests of researchers in terms of the activities that constitute effective

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<sup>72</sup> Agyris, C. & Schön, D.A. (1978) *Organizational Learning: A Theory of Action Perspective*, Addison-Wesley, Reading, Massachusetts, pp. 15-16.

<sup>73</sup> Bawden, R. (1990) op. cit., p.34.

<sup>74</sup> Dawkins, J. S. (1988) op. cit., p.3

<sup>75</sup> Dawkins, J. S. (1989), op. cit., p.12.

<sup>76</sup> Commonwealth Department of Employment, Education and Training (1991) R. D. Linke (Chair) op. cit.

<sup>77</sup> Dawkins, J. S. (1988) op. cit., p.93

action for research. These interests that also need to be represented for accountability purposes.

In light of this need to include information about effective action for research, it is the inadequacy of current appraisal frameworks for judging the quality of research that is the central concern for the present study. The standards inherent in current utility-focused, output-oriented, performance-based frameworks, privilege research output at the expense of tacit knowledge or process information about effective research practice.

This study proposes that process-oriented information is highly relevant to judgments concerning the quality of higher education research. Where process-oriented information is absent from appraisal frameworks, there is no way of recognising or assuring the sustainability of conditions or activities necessary for effective research practice.

### **Metalearning - The Tacit Dimension of the Quality ‘Whole’**

The challenge for the present study is to make explicit a framework in which the type of learning that is the basis of researching capability can be acknowledged as a legitimate component of quality appraisal standards. To achieve this goal, the object of the inquiry is the everyday activity of researchers. Schön explained that;

[o]ur knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is *in* our action . . . [and] the workday life of the professional depends on tacit knowing-in-action.<sup>78</sup>

Tacit knowledge about the effectiveness of everyday processes, according to Schön’s explanation, can provide evidence of the quality of research practice and the value of metalearning for continuing development of researching capabilities. However, tacit knowledge is generally taken for granted because it is not easily verbalised and cannot be

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<sup>78</sup> Schön, D.A., (1983) op. cit., p.49.



readily ‘measured’ or communicated. Because it is largely inaccessible to measurement, a substantial resource for valuing research activity remains untapped and unavailable to stakeholders for quality research appraisal.

Existing appraisal frameworks fail to capture tacit knowledge resources because the standards for judging research quality are oriented towards performance indicators that privilege quantifiable research output. The seductive appeal of apparent certainty, embodied in quantitative performance indicators, is strengthened by an absence of alternative ways of judging merit and worth. Quantifiable, output-oriented, performance-based indicators appear to be a ‘true’ measure of accountability in research, because these outputs are tangible and can be counted. However, Polanyi, a philosopher of science, in his discussion of tacit knowledge, argued that the belief that tangible ‘particulars can offer a true conception of things is fundamentally mistaken’.<sup>79</sup> There is the dimension of personal knowledge,<sup>80</sup> in which alternative ways of judging merit and worth are grounded in the web of ‘cultural values which are components of intersubjectively shared traditions . . . .’<sup>81</sup> This is precisely the type of knowledge that needs to be accessed for the diversity and complexity of higher education research practice<sup>82</sup> to be accommodated in quality appraisal frameworks. It is not possible for output-oriented, performance-based indicators, expressed in numerical values alone, to identify and communicate this kind of knowledge. Becher<sup>83</sup> suggests that the way forward may be to recognise the common ground in the diversity of higher education research. He proposes that;

[a]n enhanced recognition of mutuality could serve as a better defence against the intrusive managerialism which seeks to impose a crude form of accountability, based on false assumptions about the nature of intellectual endeavour, and bolstered by insensitive and often spurious ‘indicators of performance’.<sup>84</sup>

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<sup>79</sup> Polanyi, M. (1966) *The Tacit Dimension*, Routledge and Keegan Paul Ltd., London, 1966, p.19.

<sup>80</sup> Polanyi, M. (1958) op. cit., pp.55-58 & 60-61.

<sup>81</sup> Habermas, J. (1990) op. cit., pp. 68-69.

<sup>82</sup> Becher, T. (1989) op. cit., p. 24.

<sup>83</sup> Becher, T. (1989) op. cit., p.171.

<sup>84</sup> Ibid.

The present study sets out to define this common ground, to which Becher refers, through collaborative, action researching processes.<sup>85</sup> An action researching approach is one in which information, useful for improving practices, is generated through the self-reflective inquiry of research stakeholders. Fieldwork activities involving the researcher and members of five different research groups, are undertaken in this study, in order to analyse the type of activities that are valued at the level of research practice. The collective analyses generated in fieldwork activities serve as a basis for enhancing appraisal practices, by rendering accessible the tacit dimension of practical knowledge.

### **Researchers Assuring the ‘Whole’ of Quality Research by Fulfilling their Obligations as Key Stakeholders**

In 1989 Wood,<sup>86</sup> a researcher in higher education policy, proposed that if institutions and their researchers wanted to ‘secure a strong position’ in the competition for government funds, there was a need for universities to know more about the research activities in which their staff were engaged. However, increased understanding about effective action for research dictates that researchers themselves acquire enhanced skills and strategies for identifying and communicating the nature and value of their action for research. Poole,<sup>87</sup> Deputy Vice Chancellor of the Australian National University (ANU), proposed that researchers have ‘an immediate role to play in helping to develop the frameworks within which national and institutional higher education policies and practices can be interpreted and changed for the better . . .’.

The development of appropriate quality appraisal frameworks for higher education research is, however, a complex task that requires not only close attention to research practice, but also to the diversity of contexts of practice. Sizer, a leading British science

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<sup>85</sup> See Kemmis, S. & McTaggart, R. (1988) op. cit.

<sup>86</sup> Wood, F. (1989) ‘Assessing Research Performance of University Academic Staff: Measures and Problems’, *Higher Education Research and Development*, vol.8, no.2, p.237.

<sup>87</sup> Poole, M. (1994) ‘Fund drought blights research’s Cinderella’, *The Australian, Higher Education Supplement*, 7 September, p.30.

policy researcher explained why a ‘bottom-up’ rather than performance-based, ‘top-down’ perspective of quality appraisal might be more effective. He proposed that;

. . . it is difficult to develop meaningful publishable measures of institutional performance . . . because research performance assessment, like teaching quality, has to start at the level of individuals and groups in departments (or organisational units), and build up through departmental and faculty assessment.<sup>88</sup>

Further, Sizer suggests that with regard to research appraisal which is carried out;

[f]or the purposes of internal research planning, selective resource allocation, monitoring, and accountability, it is necessary to develop individual or research group and departmental profiles of the nature of the research activity that is taking place within a department or other organisational unit, and to identify the research PIs [performance indicators] that are relevant to that department’s research activity.<sup>89</sup>

In her work on quality appraisal in higher education in the UK, Green<sup>90</sup> has suggested that there can be no correct model for quality assurance in higher education, because the system is characterised by such diversity. The appraisal option proposed by Green is the development of quality profiles on an annual basis. Quality profiles, suggested Green, are a way of dealing with the diversity of contexts in which higher education research is carried out. Each research environment supports a particular profile of research processes and contributes to the overall self-sustainability, self-renewal and flexibility of knowledge generating resources in higher education.<sup>91</sup>

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<sup>88</sup> Sizer, J. (1992) “Accountability” in B.R. Clark & G.R. Neave (1992) *The Encyclopedia of Higher Education, Vol. II: Analytical Perspectives*. Pergamon Press, Oxford, p.1310.

<sup>89</sup> Ibid.

<sup>90</sup> Green, D. (1993) ‘Quality Assurance in Western Europe: Trends, Practices and Issues’, Paper presented to the First Biennial Conference and General Conference of the International Network of Quality Assurance Agencies in Higher Education Conference, Montreal, 24-28 May, p.12.

<sup>91</sup> Becher, T. (1989) op. cit., p.159.

This thesis argues that by developing the theme of ‘common ground’ suggested by Becher,<sup>92</sup> and incorporating the concept of quality profiles proposed by Green,<sup>93</sup> with Sizer’s<sup>94</sup> bottom-up type methodology, it is possible to formulate a framework for quality appraisal based on effective action for research.

### **Quality Research Environment Profiles - Greater than the Sum of the Parts**

Both Sizer<sup>95</sup> and Green<sup>96</sup> in their conceptualisation of options for valuing activity in higher education, provide the possibility of framing the quality of research in ways that are directly relevant to research activities. The information researchers require for describing and valuing what they do, is enhanced understanding of the value of everyday action for facilitating research practice.

This thesis argues that if researchers are continually to transform their research practice in ways that enable them to fulfill their obligations to research as a sphere of social life, they will need to acknowledge and to value their own metalearning processes. Quality appraisal practices may be utilised as a mechanism for this reflective appraisal task, if they include process-oriented information about effective action for research. Appraisal practices, when used in this way for the purposes of metalearning, would foster ‘second order’ understanding about activities that ensure sustainability, flexibility and renewal of quality research environments.

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<sup>92</sup> Becher, T. (1989) op. cit., p.171.

<sup>93</sup> Green, D. (1993) op. cit., p.12.

<sup>94</sup> Sizer, J. (1992) op. cit., p.1310.

<sup>95</sup> Ibid.

<sup>96</sup> Green, D. (1993) op. cit., p.12.

In summary, the argument is this. Current appraisal frameworks, because they are primarily utility-focused, output-oriented and performance-based, do not include process-oriented information about the activities and circumstances that facilitate effective research practice. Without such information, the current frameworks are inadequate for quality appraisal purposes because activities and circumstances that need to be assured for quality research practice, are not represented. If output-oriented appraisal information is to be balanced with ‘second order’ understanding about the *invisible product* of research, an alternative, but complementary appraisal framework that takes into account the importance of metalearning for research, is required.

The thesis argues that in order to meet this challenge, the type of information required to empower the collegial mechanisms of knowledge professionals, is that which is process-oriented and which makes explicit the nature of effective action for research. Current higher education research funding policies, framed in terms of utility-focused, output-oriented, performance-based standards, cannot provide such information. The bias in these policies, towards performance-based standards, is however, quite in keeping with the policy trajectory set by the government for research pursuits in higher education. It is the genesis and the effect of this problematic situation, that is reviewed in the following chapter.

## CHAPTER 2

### THE DAWKINS ERA - TRANSFORMING HIGHER EDUCATION STRUCTURES

This chapter describes how the policy initiatives of the Dawkins era shifted the focus of legitimisation and reward structures in the Higher Education environment. The first wave of Dawkins changes was directed primarily at higher education organisational and funding structures. This chapter explains how the design for the new structures was grounded firmly in economic policy, and strongly oriented towards market values. The combination of a market focus and strategic policy action on the part of Government created an environment in which a bias towards quantifiable, output-oriented, performance-based, quality appraisal practices, was inevitable. In particular, this chapter demonstrates how and why the new legitimisation and reward structures are proving a poor 'fit' for higher education research.

#### The Government's Theory of Action for Higher Education Research

It is important, for the purposes of the present study, to consider policies in terms of their assumptions and expectations regarding the role of higher education research. Policies simultaneously express both a theory of action<sup>1</sup> and a set of standards by which the merit and worth of higher education research are to be judged. A theory of action, according to Agyris and Schön,<sup>2</sup> is a theory that frames both the meaning and the intent of action because it embodies the norms, strategies and assumptions that are embedded in practice. Policies have an impact on action at the level of practice because they define:

- The language of legitimisation (effectiveness and efficiency);
- The activities that will be recognised and rewarded (research outcomes and dollar value of research grants) and;

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<sup>1</sup> Agyris, C. & Schön, D.A. (1978) op. cit., p.14.

<sup>2</sup> Agyris, C. & Schön, D. A. (1974) *Theory in Practice: Increasing Professional Effectiveness*, Jossey-Bass, San Francisco, p.14.

- The social relationships or ways of organising which are valued (selectivity and concentration).

Policies also define the obligations of Government to higher education activities, because both recognition and reward of such activities are internally related to the expectations expressed in the policy statements.

Marginson argues that, in terms of current policies, the assumptions behind the use of economic imperatives for justifying policy-led reforms in the system of higher education are the real concern. He proposes that;

[t]he Labour Government's higher education reforms were driven by supply-side economic objectives, the main one of which was the production of a more highly educated, competent and adaptable workforce. The rationale was the extension of the human capital argument about the flexibility and responsiveness of the labour force.<sup>3</sup>

Human capital theory, holds that there is a causal link between economic growth and investment in education.<sup>4</sup> Originally gaining pre-eminence in higher education policy through the recommendations of the Martin Committee in the 1960s,<sup>5</sup> human capital theory experienced varying levels of support and was reshaped over time, through a series of theoretical iterations and adaptations. In the 1980s, following the lead of the OECD, human capital theory was taken up in Australian higher education policy with a renewed interest in the contribution of education to economic performance. Education was seen, in the Dawkins era, as the 'source of flexibility and responsiveness in relation to technological and social change'<sup>6</sup> As such, education was understood to be the key to a

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<sup>3</sup> Marginson, S. (1993) op. cit., p.123.

<sup>4</sup> Ibid., pp.40-41.

<sup>5</sup> See Australian Universities Commission (1964) Committee on the Future of Tertiary Education in Australia, *Report* Volume 1 (Martin Report), Government Printer, Canberra.

<sup>6</sup> Organisation for Economic Co-operation and Development (OECD) (1987) *Structural Adjustment and Economic Performance*, quoted in Marginson, S. (1993) op. cit., p.48.

competitive advantage in meeting the challenge of the Newly Industrialising Countries.<sup>7</sup> In contrast to the earlier iterations of human capital theory, which supported Government funding of higher education,<sup>8</sup> this new interest coupled human capital theory with market reforms in a free market context. Key reforms in the funding of higher education were aimed at reducing Government subsidies and financing increased participation through funding schemes based on a 'user-pays' principle.<sup>9</sup>

Following the publication of the Dawkins policies, higher education institutions were required to implement egalitarian ideals<sup>10</sup> in their practices and develop strategic plans<sup>11</sup> to ensure the social and economic utility of their activities. While institutions were to achieve 'growth with equity in participation'<sup>12</sup> and prioritisation of 'quality in diversity',<sup>13</sup> the system was in no way geared up to deal with the appraisal and accountability requirements related to these policy imperatives. The demands of policy requirements were exacerbated at the level of the institution, because all the initiatives required of them were to take place at a time of significant structural change. Key structural changes, mapped out in the Dawkins policies, included the dismantling of the existing binary system of tertiary education and institutional amalgamations which were necessary for the establishment of the new Unified National System (UNS) of higher education.<sup>14</sup> The end of the existing binary divide between Universities and the former Colleges of Advanced Education was announced by the Minister for Employment Education and Training, in September 1987.<sup>15</sup> This abolition of the binary divide

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7 Organisation for Economic Co-operation and Development, (OECD) (1989) *New Technologies in the 1990s*, quoted in Marginson, S. (1993) Ibid.

8 Australian Universities Commission, (1964) Martin Report, vol.1, op. cit.

9 Department of Employment, Education, and Training, Higher Education Division. (1993) *National Report on Australia's Higher Education Sector*, AGPS, Canberra, p.81.

10 Dawkins, J. (1988) op. cit., p.7.

11 Ibid., p.21.

12 Baldwin, P. (1991) *Higher Education: Quality and Diversity in the 1990s*, October, AGPS, Canberra, p.v.

13 Ibid.

14 National Board of Employment Education and Training (1989) G. A. Ramsey (Chair) *Report of the Task Force on Amalgamations in Higher Education*, AGPS, Canberra, April, pp.1-2.

15 Ibid., p.1.



initiated the transformation of the system. The end of the binary system and confirmation of the Government's 'conditions for membership' for the UNS were documented in the White Paper on higher education.<sup>16</sup> The 'conditions which included new organisational forms, and accountability requirements suited to rationalisation of the system and mass education . . . [were] introduced progressively across the system'.<sup>17</sup> However, it was a challenging and difficult task for institutions to respond to the newly established accountability requirements. As Aitken, former Chairman of the Australian Research Council (ARC) observed, the analysts of change in higher education ' . . . were too optimistic in believing useful [alternative] performance indicators could be ready by 1992.'<sup>18</sup>

The Dawkins policy imperatives for egalitarian practice and strategically motivated development, introduced unavoidable strains into the fabric of the new organisational and funding structures. The respective agenda of the policy imperatives were contradictory at the level of practice because of conflicting, underlying value positions. The type of activities that flow from value positions, such as quality, diversity, equity and selectivity serve different interests and therefore different purposes. To the extent that there was conflict between the purposes served by the differing agenda, both institutional managers and academics were faced with a priority-setting and resource allocation dilemma.<sup>19</sup> When reviewing the equity and diversity agendas in mass higher education, Lingard, Bartlett, Knight, Porter and Rivzi, suggested that, ' . . . dilemmas have resulted basically from the fact that [the] . . . agenda for more equitable participation is located within a new policy regime which has sought more efficient and effective higher education . . . '<sup>20</sup> in an era of economic stringency.

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<sup>16</sup> Dawkins, J. S. (1988) op. cit. pp.10-30.

<sup>17</sup> National Board of Employment Education and Training (1989) op. cit., pp.1-2.

<sup>18</sup> Aitken, D. (1992) quoted in Juddery, B. (1992) 'Unified national system has improved universities: Aitken', *Australian Campus Review Weekly*, 17-23 September, p.9.

<sup>19</sup> Trow, M. (1974) 'Problems in the Transition from Elite to Mass Higher Education' in Organisation for Economic Co-operation and Development (OECD), *Policies for Higher Education*, OECD, Paris, pp. 51-101.

<sup>20</sup> Lingard, B., Bartlett, L., Knight, J., Porter, P., & Rivzi, F. (1994) 'Equity and Diversity in Mass Higher Education: Some policy issues', *Australian Universities' Review*, vol.37, no.2., p. 2.

Dawkins justified the structural changes on the grounds that Australia lagged behind its international competitors on a range of significant measures of education and training performance, as well as in the composition of the national skills base.<sup>21</sup> Dawkins saw these factors impacting directly on the productive capacity of Australia's economy, and resolved that the system would in future be more accountable for its use of public funds. Dawkins' position was founded on the Government's interest in creating a more competitive society, capable of attaining and maintaining a competitive advantage.<sup>22</sup> He stated that; '... the Government seeks to promote greater responsiveness of the higher education research effort to the needs of the society and the economy which supports it.'<sup>23</sup> In order to achieve the desired standard of utility, he further advised that '... higher education institutions ... will need to involve themselves in long-term strategic planning ... enhancing their flexibility and responsiveness to community needs in both teaching and research ...'<sup>24</sup>

The Government's strategic action aimed at reorienting higher education practice, involved treating '... 1988 as a year outside the normal triennial funding process'.<sup>25</sup> In justifying the resultant delay to the start of the higher education funding triennium, Dawkins<sup>26</sup> made the Government's position on the new purposes to be served by higher education practice quite clear. He proposed that there was an urgent need for Government to ensure that the education and training system within Australia would play a central role in responding to the major economic challenges confronting Australia,<sup>27</sup> and that this required a reorganisation of funding structures. In Dawkins'<sup>28</sup> view, tertiary education activities should serve as a resource for skills, knowledge and creative and innovative capabilities. The Policy Discussion Paper,<sup>29</sup> issued in relation to the

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21 Dawkins, J. S. (1987a) op. cit., pp.4-10.

22 Ibid., pp.1-3.

23 Dawkins, J. S. (1988) op. cit., p.90.

24 Ibid., p.11.

25 Dawkins, J. S. (1987a) op. cit., p.3.

26 See Science and Technology Budget Statement 1987-88, AGPS, 1987.

27 Dawkins, J. S. (1987a) op. cit., p.1.

28 Ibid.

29 See Dawkins, J. S. (1987b) Higher Education: A Policy Discussion Paper, AGPS, Canberra.

Dawkins proposals for structural changes, showed just how higher education was to serve as such a resource. The proposed changes, therefore, were demonstrable evidence that, as Marginson observed, the Government's current theory of action for higher education was based on a 'supply-side' argument.<sup>30</sup>

Within the framework of a supply-side view of higher education, Dawkins informed stakeholders that;

[t]he Commonwealth [would] . . . identify national goals and priorities for the higher education system, and ensure that system-wide resources [were] . . . allocated effectively in accordance with these priorities.<sup>31</sup>

The introduction of educational profiles was the medium for this strategic action on the part of Government. The *National Report on Australia's Higher Education Sector*<sup>32</sup> observed that profiles, outlined in the Dawkins White Paper, were in effect an agreement between Government and the institution. Profiles were the basis for gauging both the resources required to fulfill the institution's mission and goals as well as the standards for assessing achievement of these goals. In a strategic sense, the profiles were intended to influence institutional planning and prioritisation in decision-making. In Dawkins' own words, ' . . . educational profiles [were] . . . an important instrument for this purpose.'<sup>33</sup> With these new initiatives, the Government assured institutions of autonomy in managing their own resources without unnecessary intervention. At the same time, however, the introduction of profiles served to make universities clearly accountable for the goals they set.

The core of the Government's theory of action for research was that publicly-funded research ought to serve primarily, an *instrumental*<sup>34</sup> function. The theory of action is

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<sup>30</sup> Marginson, S. (1993) op. cit., p.123.

<sup>31</sup> Dawkins, J. S. (1988) op. cit., p.10.

<sup>32</sup> Department of Employment, Education and Training, Higher Education Division, (1993) op. cit., p.304.

<sup>33</sup> Dawkins, J. S (1988) op. cit., p.10.

<sup>34</sup> Habermas, J. (1982) 'A Reply to my Critics' in *Habermas: Critical Debates*, John B. Thompson and David Held (eds) (1982) op. cit., p.263.

instrumental in the sense that research in higher education was seen as a mechanism for stimulating Australia's relatively weak, industry-based, research and development activity. Stimulation was required in order to achieve national development goals.<sup>35</sup> To this end, Dawkins assured the community that '... the Government reaffirms its intention that an increasing share of higher education resources should be directed towards those fields of study of greatest relevance to the national goals of industrial development and economic restructuring.'<sup>36</sup> In this context, claims for the merit and worth of research were those that demonstrated:

- Economy in a climate of constraint in overall public expenditure;<sup>37</sup>
- Institutional efficiency in use of resources;<sup>38</sup> and
- Effectiveness in terms of capacity for and record of research performance.<sup>39</sup>

It was this type of language that defined the standards by which the merit and worth of research activity were to be recognised and rewarded. When institutional profiles were linked through research funding policies to strategically-determined ways of organising for research, then the Government's theory of action for research became a powerful force in shaping the discourses, practices and social relations of higher education.<sup>40</sup>

## **Transforming the Fabric of Higher Education**

The Dawkins statements of 1987<sup>41</sup>, 1988<sup>42</sup> and 1989<sup>43</sup> were key documents in the shaping of higher education because they played a pivotal role in the emergence of new

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35 Marginson, S. (1993) op. cit., p.137.

36 Dawkins, J. S. (1988) op. cit., p.8.

37 Ibid., p.4.

38 Ibid., p.86.

39 Ibid., p.92.

40 McTaggart, R. (1991) op. cit., p.83.

41 See Dawkins, J. S. (1987a) op. cit.

42 See Dawkins, J.S. (1988) op. cit.

43 See Dawkins, J. S. (1989) op. cit.

principles for organising and funding the activities of higher education in Australia. The scope of social change embodied in these principles is represented in Chart 2.1, which summarises the key aspects of structural reorientation ushered in by Dawkins in the *Challenge for Higher Education in Australia*.<sup>44</sup>

**Chart 2.1 : The New-Look Fabric for Higher Education in Australia**

Changes to social relationships and organisational forms including administration, organisation and coordination in the new structures:	<ul style="list-style-type: none"> <li>• changing the binary system to the UNS with rationalisation through amalgamations - minimum size institutions, with improved efficiency</li> <li>• changed Commonwealth/State relations with respect to responsibilities and accountability arrangements for higher education</li> <li>• changed responsibilities with regard to provision of resources in the context of desirable growth rates</li> <li>• encouragement of entrepreneurial activity and collaborative development options</li> </ul>
Introducing the new language of legitimisation and reward:	<ul style="list-style-type: none"> <li>• productivity in higher education, more effective and efficient use of massive capital investment</li> <li>• better definition of institution's roles and missions - co-ordination with national objectives</li> <li>• performance-based incentives and reward structures</li> </ul>
Transforming higher education practice:	<ul style="list-style-type: none"> <li>• rationalisation of course offerings to eliminate duplication and low utility courses</li> <li>• changed human resources conditions and expectations (increased flexibility/mobility)</li> <li>• reform of institutional management and decision-making processes</li> <li>• postgraduate education and specialisation versus multidisciplinary focus</li> <li>• increased higher education opportunities through external studies</li> </ul>

In effect, the Dawkins policy statements provided the framework for structural transformation of the entire system of higher education in Australia.<sup>45</sup>

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44 Dawkins, J. S. (1987a) op. cit., pp.10-13.

45 Baldwin, P. (1991) 'Labour's Higher Education Policies' in Anwyl, J. (ed) (1991) *CSHE Spring Lectures on Higher Education*, The Centre For Study in Higher Education, University of Melbourne, pp.1-10.

The theory of action embodied in the Dawkins statements continues to steer higher education policy through the central theme of socio-economic utility and accountability.<sup>46,47</sup> In the context of the Government's supply-side framework for higher education practice, public *accountability* is to be demonstrated through the utility of higher education outputs.<sup>48</sup> For this reason, the type of indicators which best suit current appraisal purposes are objective, measurable outputs that can be used to justify higher education expenditure in relation to social and economic development needs. Marginson observed that, 'Policy and management need output information of a certain type. Policy makers want measures . . . that are simple, comprehensive and able to be expressed in money terms, enabling "precise" comparisons of costs and benefits.'<sup>49</sup> It was these conditions of structural change to legitimation and reward, set in train by the Dawkins policies, that provided the groundwork for a significant move towards performance-based quality appraisal activities in higher education.

Dawkins' *Challenge for Higher Education in Australia*,<sup>50</sup> provided a narrative account of the significant policy-led reorientation in the purposes to be served by higher education. Changed purposes were ensured by structural adaptations across all domains of action in higher education. With the new-look fabric for higher education, illustrated in Table 1.1, the language of 'efficiency' and 'accountability' displaced the discourse of the elite academic institution, which revolved around 'scientific merit' and 'academic excellence'. In the 1980s and 1990s, traditional quality criteria were assimilated into the 'utility' agenda, in order to achieve, as Dawkins notes, ' . . . the standards of intellectual capacity essential for success in an increasingly competitive world.'<sup>51</sup> The focus was centred firmly, on efficiency and accountability.

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46 Marceau, J. (1993) op. cit., p.3.

47 Garrett-Jones, S., Turpin, T., Bellavista, J. & Hill, S. (1995) *Using Basic Research, Assessing Connections between Basic Research and National Socio-economic Objectives, Part 1: Review of Current Theory and International Practices*, National Board of Employment, Education and Training, Commissioned Report No.36, AGPS, Canberra, p.93.

48 Marginson, S. (1993) op. cit., p.89.

49 Ibid., p.107.

50 Dawkins J. S. (1987a) op. cit., pp.10-13.

51 Ibid., p.15.

At the institutional level, the new structures for higher education practice included ‘more “corporate” management structures, . . . flexible employment contracts, new forms of financial control [and] strategic planning hierarchies of managerial accountability.’<sup>52</sup> The Government both encouraged institutions to amalgamate and introduced a more competitive environment. Funding was to be allocated on the basis of institutional performance compared with the agreed framework of self-determined goals and objectives in educational profiles.<sup>53</sup> A funding structure based, as this was, on institutional performance, inevitably raised the issue of appropriate performance ‘measures’. Murphy, a Research Fellow from the Centre for Research Policy at the University of Wollongong, observed that;

[a] . . . corollary of “massifying” higher education is an increased concern for its quality: both over variability within the much enlarged group of institutions . . . now called universities, and over the threat to standards which rapid expansion is sometimes thought to pose.’<sup>54</sup>

The changes outlined by Dawkins were far-reaching because they entered into every aspect of the structures of academic institutions. These structures included the social relations of organisation, the language of legitimation and reward for higher education practice, and the very activities that constituted higher education as a sphere of social life.

### **Drafting the Pattern for Legitimation and Reward of Higher Education Research**

The Government’s specific expectations for research in higher education were itemised in the Dawkins White Paper<sup>55</sup> of 1988 and elaborated in the 1989 Dawkins paper, *Research*

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<sup>52</sup> Hill, S. (1993) ‘The Future for Sale’ in *Search*, vol.24, no.3., April, p.65.

<sup>53</sup> Dawkins, J. S. (1988) op. cit., p.10.

<sup>54</sup> Murphy, P. (1994) ‘Research quality, peer review and performance indicators’, *Australian Universities Review*, vol.37, no.1, p.15.

<sup>55</sup> Dawkins, J. S (1988) op. cit., p.89.

*For Australia: Higher Education's Contribution.*<sup>56</sup> In essence, according to the Dawkins White Paper, 'The Government supports research in order to:

- Encourage fundamental inquiry for the advancement of knowledge;
- Develop skills in analysis, interpretation and problem-solving;
- Enhance the national scientific and technological capacity; and
- Create and maintain a reservoir of expertise which can be applied to any problems and opportunities that may face the nation.<sup>57</sup>

The latter two objectives, in particular, indicate the influence of economic policy in the shaping of standards for what was valued by the government in research practice. In the *National Report on Australia's Higher Education Sector*, Government policy was acknowledged as the prime force in changing the role research was to play in the cultural, social and economic development of the nation.<sup>58</sup>

Supply-driven logic underpins the Government's hopes that the funding of strategic and applied research in universities will stimulate private sector development and manufacture of products for export.<sup>59</sup> Supply-driven logic is also the basis for the Government's strategic role in shaping research directions. The supply-side theory holds that research directions are to be congruent with national priorities, because the industrial sector cannot afford innovative research and development programs.

Policies founded on a supply-side logic have been based, according to Marginson,<sup>60</sup> on a flawed understanding of the economic role of higher education. It is not, according to Marginson, the supply of skilled and competent graduates [or basic and applied research] that is the problem, but the failure of the labour market to utilise these skills,

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<sup>56</sup> See Dawkins, J. S. (1989) op. cit.

<sup>57</sup> Dawkins, J. S. (1988) op. cit., p.89.

<sup>58</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.245.

<sup>59</sup> Marginson, S. (1993) op. cit., p.141.

<sup>60</sup> Ibid.



competencies and understandings. Furthermore, with the way in which higher education policies are framed, the flaw in the Government's logic cannot be addressed because it is simply not acknowledged. Marginson claimed that unless mutually shaping changes occur in the ways in which industry and the community organise to use the skills, research products and capabilities of higher education, the essential link to economic development is missing. He stated that;

[i]t is the conditions of possibility in industry itself that must change. The universities have an important supporting role to play through applied research and (principally) basic research and research training. They cannot find and invest the capital. *That* is the missing link in the research and development system.<sup>61</sup>

The supply-side theory of action, framing higher education research policy, is grounded in the assumptions and values broadly grouped as 'economic rationalism'. Such assumptions and values were founded, in the narrowest sense, on the generative metaphors<sup>62</sup> of Newtonian Physics, in which reality was modeled as a 'closed system'.<sup>63</sup> In this closed system model, time was ignored and the components of the system related to each other in fixed parameters in static equilibrium, like the workings of a clock. The sum of the parts was the measure of the system and its operation. In this closed system, 'utility' was equated with the function of 'energy' in the physics paradigm. Marginson observed that within this framework, 'The central figure [was] always the rational, choice-making individual, whose objective [was] always the maximisation of private utility.'<sup>64</sup> Burchell, Editor of Australian Left Review (ALR), proposed that it was this narrow interpretation that equated economic rationalism with the understanding that the market could always '... do everything better than Governments,

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61 Ibid.

62 Lakoff, G. & Johnson, M. (1980) *Metaphors We Live By*, The University of Chicago Press, Chicago, Ch.,12 & Ch.,13.

63 Weekes, W. H. (1993) 'Towards a new economic paradigm', *21C: Previews of a Changing World*, Winter, p.68.

64 Marginson, S. (1993) op. cit., p.65.

bureaucracies and the law.’<sup>65</sup> In this view of economic rationalism, observed Burchell, the free market approach was supported wherever possible and this included the activities of higher education.<sup>66</sup> Burchell explained that, ‘The defining feature of this kind of economic thinking [was] the picture of the economy as a collection of markets all trying to find equilibrium through the mechanism of supply and demand, regulated through the price mechanism.’<sup>67</sup> However, according to Burchell, this narrow view of economic rationalism equated with ‘neoclassical economic theory’ where supply and demand operate in a closed system, is organised on the principle of utility. This neo-classical view, in Burchill’s opinion, fails to acknowledge the strategic role of Government at the level of practice, in defining the purposes to be served and shaping the structures of social life to achieve such purposes.

Burchell proposed that the Australian Government, by *responding* to perceived problems in the higher education ‘marketplace’ with particular policy initiatives, was seeking to achieve an acceptable balance between two antithetical ideologies: rational economics and the provision of policies that would enhance the social well-being of society.<sup>68</sup> Burchell claimed that in terms of practical politics, the “economic rationalism” [now dominant as the Australian Government’s theory of action] could never hope to abolish the need for Government supervision and intervention which characterises modern-day economies across the globe.’<sup>69</sup> Therefore, the term ‘economic rationalism’, as expressed in Australian higher education policy, may be used in the broader sense ‘to indicate a set of attitudes, prejudices and policy prescriptions which may or may not strictly derive from the principles of [neo-classical] economic theory. . . .’<sup>70</sup> In practice, observed Burchell,

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<sup>65</sup> Pusey, M. (1991) quoted by Burchell, D. in ‘Reason To Worry’, in *Australian Left Review (ALR)* (1991) December, p.27.

<sup>66</sup> Bessant, B. (1995) ‘Corporate management and its penetration of university administration and government’, *Australian Universities’ Review*, vol.38, no.1, p. 59.

<sup>67</sup> Burchell, D. (1991) op. cit., p.28.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid.

<sup>70</sup> Ibid.

economic rationalism is more representative of the art of government. The way in which the Government elects to use economics as a tool for achieving ‘good government’ by the most economical means, is a demonstration of the efficacy of the particular ruling party’s ‘art’ in government.

This thesis argues, however, that in the case of competitive funding structures for higher education research, the ‘art’ of Government proved to be more ‘artful’ than ideologically balanced. With the current infrastructure crises,<sup>71</sup> Government, with its competitive funding policies for higher education, is increasingly falling short of its obligations to the ‘well-being’ of research practice as a form of social life. This is because, in an economic rationalist framework, conventional or otherwise, the only activity that is recognised and valued is that which can be represented in economic terms. Marginson pointed out that much of what goes on in higher education does not even register as ‘economic’ in the conventional neo-classical sense. The Government’s use of economics as a tool for demonstrating the ‘good’ governance of public funds for higher education research pursuits, means that much of higher education practice is ‘measured . . . as no activity at all.’<sup>72</sup>

Overall, the Dawkins and post-Dawkins policy initiatives demonstrate how the Government’s assumptions and strategies are steering research appraisal practices towards performance-oriented market values. The Dawkins policy initiatives are built on trajectories established by a number of key policy studies in the late seventies and the early eighties. Building on these studies, Dawkins ushered in the new era of ‘market-oriented’ organisation, management and funding, for higher education in Australia.<sup>73</sup> Among the most influential of the studies leading to the changes that have occurred were;

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<sup>71</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) *University Research Infrastructure: An Indicative Study*, Report No. 5, Centre for Research Policy, University of Wollongong, Wollongong.

<sup>72</sup> Marginson, S. (1993) op. cit., p.66.

<sup>73</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.246.

the Australian Science and Technology Council (ASTEC) Report,<sup>74</sup> the Committee of Inquiry into Education and Training in Australia, the Williams Committee,<sup>75</sup> and the Smith Committee Report, *Higher Education Research Policy*.<sup>76</sup>

It was the ASTEC Report<sup>77</sup> in particular, with its recommendation concerning the establishment of the ARC, that laid the groundwork for significant changes to the reward and legitimisation structures for higher education research. The ASTEC report emphasised, that while general support through the Commonwealth Tertiary Education Commission (CTEC) appeared to be comparable with most OECD countries, the level of direct support for research in Australia was very low. ASTEC proposed that this situation seriously limited the return to the nation for its substantial investment in higher education research. The solution, according to the ASTEC report, was to give greater emphasis to direct funding for research.

The central pillar of ASTEC's recommendations, framed in economic rationalist terms, was the proposal that what was needed was a competitive funding scheme to improve both the relevance and the management of higher education research activity. Their recommendations included, at the system level, the establishment of the Australian Research Council, and at the institutional level, the development of publicly available research management plans.<sup>78</sup> As noted in the Centre for Research Policy Report on university research infrastructure, the concept of research management plans was taken

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<sup>74</sup> Australian Science and Technology Council (ASTEC) (1987) R. Slatyer (Chair) *Improving the Research Performance of Australia's Universities and Other Higher Education Institutions: A Report to the Prime Minister*, Commonwealth Government Printer, Canberra.

<sup>75</sup> Committee of Inquiry into Education and Training (1979) Williams, B. (Committee Chair) *Report of the Committee of Inquiry into Education and Training to the Department of Employment, Education and Training*, Volume 1 (Williams Report), Canberra: AGPS.

<sup>76</sup> Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) *Higher Education Research Policy, Report to the Department of Employment, Education and Training* (Smith Committee), AGPS, Canberra.

<sup>77</sup> See Australian Science and Technology Council (ASTEC) (1987) op. cit.

<sup>78</sup> Ibid, pp.3-5.

up and in practice provided ‘. . . a device . . . to sharpen the degree of selectivity and concentration in different universities’.<sup>79</sup> More important than the influence on organisational arrangements for research, however, was the steering power of these plans. Management plans came to play an important role in shaping the criteria for recognition, legitimation and reward of research practice, because of their influence on preferred research strengths and directions, at the level of the institution.

Dawkins, in his paper *The Challenge for Higher Education in Australia*, stated that; ‘. . . where necessary [the Government would be] using funding [in the form of more competitive arrangements] as a primary lever for reform’.<sup>80</sup> Indeed, the reorientation of funding arrangements, that is, the Government-directed legitimation and reward structures, proved to be the lever for the first wave of changes to the organisation and management of research in higher education. Regardless of its efficacy, the market principle of *competition*, around which the reorganisation of higher education took place, became a pervasive force across the UNS at the level of research practice. Marceau, from the Research School of Social Sciences at the ANU observed that;

. . . the higher education system as a whole must now move visibly to compete for funds with other claimants on the public purse; the institutions constituting the system must compete amongst themselves for a share of the resources provided; to obtain them they must respond to administrative and market signals about desirable directions to take . . .<sup>81</sup>

The particular type of competition that shapes the competitive research environment in Australia is very much a contrivance of Government funding mechanisms.<sup>82</sup> The ‘competition’ is organised around values that are oriented towards success in attracting research funds. In this competitive funding environment, which has emerged as the

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<sup>79</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op. cit., p.10.

<sup>80</sup> Dawkins, J. S. (1987a) op. cit., p.9.

<sup>81</sup> Marceau, J. (1993) op. cit., pp. 5-6.

<sup>82</sup> Murphy, P. (1995a) ‘Research Indicators, Funding and Quality Assurance’, Paper presented to the Conference on Finding New Sources of Higher Education Funding, Faculty of Science, University of New South Wales, Sydney, 14-16 March, p.1.

*modus operandi* of higher education, research funding policies have replaced the symbols of academic excellence with symbols of market utility.<sup>83</sup> Meek, whose research interest is in the sociology of higher education, observed that in the medium of exchange which characterises a market framework for action, 'the index of value is money, and all differences of quality become turned into differences of quantity'.<sup>84</sup> The criteria for judging the merit and worth of research in Australia now clearly reflect the underlying market values and include:

- More productive use of institutional resources and facilities;
- Targeting of resources and improved institutional management;
- Flexibility and incentives for performance; and
- Overall, encouragement of productive competition.<sup>85</sup>

The language used to describe and to justify the merit and worth of higher education activities *is*, in this context, that which derives from the framing of research practice in economic terms. Neither academics nor academic institutions are accustomed, however, to describing their activities in the language of economic accountability.<sup>86</sup> Hunter observed, when writing on the political rationality of the humanities, that, '...we are confronted by a collision between two discourses whose mutual incomprehension is matched only by their internal coherence'.<sup>87</sup> Marceau in her review, *International Trends*

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<sup>83</sup> Habermas, J. (1987) op. cit., p.183.

<sup>84</sup> Meek, V. L. (1994) 'Lesson for economic rationalists - and in their own terms'. A Review of Simon Marginson's monograph, *Education and Public Policy in Australia*, in *Campus Review*, January 20-26, p.10.

<sup>85</sup> Dawkins, J. S. (1988) op. cit., p.11.

<sup>86</sup> Marginson, S. (1993) op. cit., p.123.

<sup>87</sup> Hunter, I. (1991) 'Personality as a Vocation: the Political Rationality of the Humanities', in Hunter, I., Meredyth, D., Smith, B. & Stokes, G. (eds.) (1991) *Accounting for the Humanities: The Language of Culture and the Logic of Government*, Institute for Cultural Policy Studies, Griffith University, Brisbane, p.11.

in *The Financing and Governance of Higher Education*, observed that this was a global, and not just a local, phenomenon. Marceau stated that;

[c]ompetition for funds from a relatively shrinking public purse [in OECD countries] increases pressure for quantifiable outputs as a legitimising device, [which] invites tighter controls on accountability in the spending of public moneys and generates a new spirit of ‘managerialist’ governance.<sup>88</sup>

Both the language of economic accountability and its practical organisational counterpart, institutional ‘managerialism’, have tended to displace, and in some cases replace,<sup>89</sup> the legitimating discourses of academic communities at the level of institutional administration. The result has been an inevitable slide towards easily quantifiable, performance-based legitimation criteria that replace, rather than condense, shared understandings amongst academic communities about qualities of academic excellence.

### **Flaws in the New Fabric for Higher Education Research**

Bessant,<sup>90</sup> of the Education Department at La Trobe University, raised the problematic issue of increasingly managerialist orientations in university governance. The present study proposes that, apart from the shortcomings noted earlier in the chapter by Marginson, and here by Bessant, there are specific limitations to the economic rationalist view as it relates to higher education governance. Such limitations are experienced at the level of the institution because of the inadequacies of current legitimation and reward systems for higher education research. The focus on extrinsic economic interests to be served by higher education, and in particular research pursuits, means that no explicit value is attached to the conditions that are necessary for sustainability, renewal and flexibility of innovative knowledge resources and this impacts on priority-setting for

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88 Marceau, J. (1993) op. cit., p.3.

89 Habermas, J. (1987) op. cit., p.281.

90 Bessant, B. (1995) op. cit , p. 59.

resource allocation within institutions. By conceptualising the value of higher education practice in economic terms, the Government fails to encompass in its theory of action, those aspects of research practice that are not reducible to economic criteria. With its focus on utility, accountability and performance-based measures, the Government's theory of action simply assumes that there will be a continuing 'supply' of the knowledge, skills and capabilities to underpin the research output that is directly measurable in economic terms.

The central problem with the current framing of infrastructure funding based on competitive advantage, is that self-sustainability of knowledge-generating 'resources' cannot be assured in the physical, much less the cognitive sense. Those aspects of research practice that underpin assurance of self-sustainability and renewal of researching capability are the 'cognitive infrastructures' of effective research practice. Cognitive infrastructures may be thought of as reference systems<sup>91</sup> which encompass the stock of cultural, social and personal knowledge that underpins effective action for research. Habermas,<sup>92</sup> explains that these infrastructures are the resource of meaning and situation definitions. It is access to this resource that enables individuals to take part in the processes of reaching understanding and coordinating action in research, which is their particular sphere of social life.

Members of research groups continually share understandings about the purposes of their action, by using cognitive infrastructures, as a resource for defining and coordinating action. Shared value orientations which arise from these cognitive infrastructures underpin the development of capacities for effective action in the relevant *social space*. Social space, according to Habermas, is inherent in cultural reproduction and is defined by shared understanding of the meaning and value of action.<sup>93</sup> This shared

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<sup>91</sup> Habermas, J. (1987) op. cit., p.136.

<sup>92</sup> Ibid., pp.136-137.

<sup>93</sup> Ibid., pp. 140-141.



understanding is secured through the continuity and coherence of understandings necessary for daily practice in the particular sphere of social life. However, acknowledgement and support of infrastructures that would secure the social space of research, are nowhere to be found in the Government's current legitimization and reward systems for higher education research

There is a strong indication that with the move to mass education, the physical and cognitive<sup>94</sup> infrastructures that provide the base for higher education researching capability are being eroded progressively. The Centre for Research Policy Infrastructure Report observes that, 'The pressure of an inadequate global level of infrastructure support on universities is severely impacting on research.'<sup>95</sup> While insufficiency in terms of buildings, up-to-date or even adequate equipment and support staff, are easy to itemise, these inadequacies may be addressed with targeted funding, should it be made available. Of greater concern, and potentially far greater significance to the sustainability, flexibility and renewal of research capabilities, however, is the undermining of cognitive infrastructures or cognitive reference systems<sup>96</sup> with the consequent erosion of effective research space. It is these systems, as explained previously, that provide the 'blueprint' for effective action in research practice.

The Government's current theory of action for research privileges legitimization and reward systems that value the utility-focused, performance dimension of research. Performance is valued, largely to the exclusion of process information which serves effective action and identity formation within research processes.

With the process dimension of research practice missing from legitimization and reward systems, the risk is that cognitive infrastructures sustaining effective research practice

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<sup>94</sup> Ibid., p.136.

<sup>95</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op. cit., p.60.

<sup>96</sup> Habermas, J. (1987) op. cit., p.136.

will continue to be undermined. Becher,<sup>97</sup> warned that with the utility and accountability agendas based as they are, on rational economics, came the potential for increasing intellectual subservience within academic environments.

### **Spotlight on the New Design Structures for Research**

The ASTEC Report<sup>98</sup> of 1987 articulated the guidelines, described in this chapter, for reorienting academic environments towards utility and accountability. As has been demonstrated, this reorientation played a significant role in transforming the activities of higher education research. However, it was the Smith Committee's<sup>99</sup> recommendations, specifically, that strongly influenced the theory of action Dawkins adopted in refocussing higher education legitimisation structures for research. The two organising principles for research funding which emerged from the Smith Committee Report were that:

1. Research funds should be allocated competitively and should go to those institutions and individuals best able to make effective use of them; and
2. Funding allocation processes, whether to individuals or to institutions, and the establishment of priorities should be based on explicit criteria and transparent decision-making processes that are available for public scrutiny.<sup>100</sup>

The more established institutions have, to some extent been insulated from the effects of the utility and accountability agendas, by their stronger ties with traditional legitimisation and reward structures.<sup>101</sup> However, the impact of utility and accountability agendas on research as a form of social life is in evidence across the UNS in the changing

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<sup>97</sup> Becher, T. (1989) op. cit., p.169.

<sup>98</sup> Australian Science and Technology Council (ASTEC) (1987) op. cit.

<sup>99</sup> Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) op. cit.

<sup>100</sup> Ibid., p.12.

<sup>101</sup> Becher, T. (1989) op. cit., p.57.

organisational and funding arrangements for research.<sup>102</sup> Dawkins, following on the recommendations of ASTEC and the Smith Committee, proposed that if Government funding of higher education research was to be fully effective, concentration and selectivity were essential. This assumption was clearly evident in the reorganisation of research activity. In large part, these changes were brought about through Government leverage afforded by funding priorities and competitive funding mechanisms. Marginson noted that the competitive research grants scheme of the ARC;

. . . favour[ed] team-based medium term research projects, with outcomes that [could] be defined in advance. The ARC tends to valorise projects which combine conceptual development with social and economic needs or problems. Its systems tend to favour projects in the band between strategic basic research and applied research of an innovative nature.<sup>103</sup>

The flow-on effect of this theory of action about the most appropriate activities and organisational arrangements for research, can be seen in the unprecedented growth of research centres within the system. A study by The Centre for Research Policy at the University of Wollongong<sup>104</sup> noted that;

. . . of the 610 research centres . . . surveyed across the Australian system, 88% of the centres located in new universities conducted mainly applied research, compared with 54% of centres in old universities; and 30% of centres located in new universities were mainly funded by contract, compared with 16% of centres in older universities.<sup>105</sup>

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<sup>102</sup> Hill, S. (1993b) 'The Window behind the Filing Cabinet: The Contribution of Social Science Research to Understanding the Purposes and Processes of Research Funding', in F.Q. Wood and V.L. Meek (eds.), *Research Grants Management and Funding*, Proceedings of an International Symposium on Grant-Giving and Grant-Management Procedures and Processes in Comparative Perspective held on 25-26 July 1993, Australian Academy of Science, ANUTECH Pty. Ltd., Canberra, p.185.

<sup>103</sup> Marginson, S. (1993) op. cit., p.140

<sup>104</sup> Marsh, A., Turpin, T. & Hill, S. (1992) *Concentration and Collaboration: Research Centres in The Australian University System*, Centre for Research Policy Research Report No.7, Centre for Research Policy, University of Wollongong, Wollongong.

<sup>105</sup> Hill, S. (1993b) op. cit., p.186.

The cautions about intended strategies for system change raised by both the ASTEC and Smith Committee reports were, however, lost in the restructuring process. The ASTEC Report had offered a particular recommendation concerning the transfer of funds to support the new initiatives in competitive funding.

[We do] not endorse a transfer of any general university funding from CTEC to the ARC; it is important not to undermine the major teaching function of higher education institutions. In addition, without a healthy infrastructure base, it is a futile exercise to fund expensive, new research initiatives as any erosion of this infrastructure support would retard the effectiveness of the ARC itself.<sup>106</sup>

This warning was reinforced by the Smith Committee when commenting on the redirection of research monies (from the pre-1987 universities) to fund competitive allocations for research by the ARC. The Smith Committee noted<sup>107</sup> that the transfer of funds, to which ASTEC had referred, appeared to have been carried out without regard to the institutional research performance, research capacity, or potential for research. Neither did competitive research funding allocations take cognisance of whether or not a university had been notionally over- or under-funded in the past. The Smith Committee indicated its concern for the research enterprise as a whole.

The continued withdrawal of funds from universities and their reallocation through the ARC may disadvantage the wide range of other Government research granting agencies and programs that presently offer marginally-costed research grants to higher education institutions on the assumption that appropriate infrastructure support is available.<sup>108</sup>

## **Funding Mechanisms for Research Infrastructure - Undercutting the Seams**

The environment of fiscal constraint did, in effect, provide<sup>109</sup> a somewhat barren ground for the new initiatives to take root.<sup>110</sup> With the restructuring of the system in a context of

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<sup>106</sup> Australian Science and Technology Council (ASTEC), (1987) op. cit., p.8.

<sup>107</sup> Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) op. cit., p. 41.

<sup>108</sup> Ibid., p. 42.

<sup>109</sup> Marceau, J. (1993) op. cit., p.2.

<sup>110</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op. cit.

limited resourcing, there was an institutional scramble for funding,<sup>111</sup> identity<sup>112</sup> and survival<sup>113</sup> that masked deeper issues concerning the value of higher education activities, and in particular, research. Karmel, former head of CTEC and former Vice-Chancellor of the ANU, observed that;

[i]nstitutions have necessarily been concerned with short-term survival and have been reacting, sometimes frenetically to a stream of Government directives and policies. At the same time, pressures for entrepreneurship within institutions and accountability to outside authorities have reinforced a sense of coping from day to day.<sup>114</sup>

Changes to infrastructure arrangements have indeed played a crucial role in shaping the response of institutions to the new reward structures. In the interests of accountability and utility, traditional indicators of research excellence have been valorised as a 'measure' of quality research.<sup>115</sup> This valorisation, or establishment of an artificial price value, has taken place as institutions attempt to secure, on the grounds of their research performance, a larger share of limited infrastructure funding resources.<sup>116</sup>

Both Sheehan, Chair of the Research Grants Committee of the ARC<sup>117</sup> and Karmel,<sup>118</sup> underscored the importance of confronting and contesting the current legitimisation

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<sup>111</sup> McNicol, D. (1992) 'UNS: Straitjacket - or preserver of diversity' *Campus Review*, 19-25 November, pp.9 &19.

<sup>112</sup> Australian Vice Chancellors' Committee (1992b) *Australian universities in a changing world: Report for the 1993-95 Triennium*, Australian Vice-Chancellors' Committee (AVCC), Canberra, May, p.1.

<sup>113</sup> Karmel, P. (1994) 'Competition must not sell universities short', *The Australian*, Higher Education Supplement, 9 November, p.32.

<sup>114</sup> Ibid.

<sup>115</sup> Marginson, S. (1993) op. cit., p.140.

<sup>116</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op. cit. pp.10-13.

<sup>117</sup> Research Grants Committee of the Australian Research Council (1993) Sheehan, P.W. (Chair), 'An Analysis of the Demand for Research Support: A Case For Funding of the Large Grants Scheme' *Draft Report to the Senate Standing Committee on the Organisation and Funding of Research in Higher Education*, April, p.v.

<sup>118</sup> Karmel, P. (1994) op. cit., p. 33.

structures, because of the inherent risks that they pose to sustainability of academic endeavour. Both of these writers demonstrated ways in which the Government's theory of action for research may be undermining the researching capabilities of higher education. Sheehan observed that;

[w]hat has developed is a context where demand is pushing a system as if there are ample resources to reward good performance. Growth is occurring in a culture that can't be nurtured, and increased capacity can't be utilised.<sup>119</sup>

Karmel<sup>120</sup> warned of the risks inherent in the increasing managerialism in universities, and the entrepreneurial attitude that accompanied the trend noted by Sheehan. He saw under-investment in basic research as a risk to Australian academics, in that insufficient support for this aspect of knowledge growth would prejudice Australia's standing in, and ultimately access to, the club of international scholarship and research. The impact of under investment in basic research, observed Karmel, would be reduced capacity to undertake high level applied research, which in turn, would be compounded by the barriers that industrial collaboration and commercialisation erected to prevent free and open exchange of knowledge. The implication of these developments is that the academic identities of researchers have been placed at risk, as has their capacity to respond to emerging economic and social development needs.

### **Testing the 'Fit' of the New Legitimation and Reward Structures**

With the creation of the UNS and the implementation of wide-ranging structural reforms, the Government transformed the social relations of knowledge production in higher education. That is to say, the move to mass education in an era of economic stringency

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<sup>119</sup> Research Grants Committee of the Australian Research Council (1993) op. cit., p.v.

<sup>120</sup> Karmel, P. (1994) op. cit., p.33.

meant that legitimate access to the means of knowledge production<sup>121</sup> or physical and cognitive infrastructures had been, at best restricted, and at worst, greatly undermined.<sup>122</sup> The difficulties that researchers now face are linked directly to the significant increase in competition amongst institutions for limited infrastructure funds, and to an absence of any framework for identifying, or valuing, those practices that sustain and renew higher education researching capabilities. This situation has changed markedly the conditions of knowledge production because of the ways in which it has influenced the quality of research environments.

Becher,<sup>123</sup> proposed that Government intervention in ‘cultural systems’ such as academic communities, could pose a threat to their viability. He suggested that;

Much as it can be shown that ecological environments establish a homeostasis which may be disrupted in quite unanticipated ways by external intervention, so too it can be argued that cultural systems depend on a delicate mutual adjustment of interests which, if insensitively encroached upon, can result in their disintegration.<sup>124</sup>

Based on Habermas’<sup>125</sup> descriptive account of crisis that can occur in patterns of organised social action, Government intervention could impact on the researchers’ obligations towards the academic environment. Government intervention could also affect the social relations and practices that make up the collective identity of the researchers’ knowledge domain. In effect, the social relations and accepted practices of a particular knowledge community may be disrupted or undermined if legitimisation and

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<sup>121</sup> Habermas, J. (1982) ‘A Reply to My Critics’, in Thompson, J.B. & Held, D. (eds), *Habermas: Critical Debates*, Macmillan Press Ltd., London, 1982, p.267.

<sup>122</sup> Beazley, K. C. (1993b) Report of the National Board of Employment, Education and Training, *Higher Education Research Infrastructure*, AGPS, Canberra, August, pp. 42-43.

<sup>123</sup> Becher, T. (1989) op. cit., p.169.

<sup>124</sup> Ibid.

<sup>125</sup> Habermas, J. (1987) op. cit., pp.142-143.

reward systems fail to recognise, value and support the type of activities that sustain and enhance cognitive infrastructures. This is a particular concern for the present study, given the diversity and complexity of higher education research as a sphere of social life. As Becher noted, ‘the ideals and the practices of academic communities are intimately bound up with the nature of the knowledge they pursue.’<sup>126</sup>

The present study argues that the translation of quality research indicators into ‘market’ values has resulted in a legitimisation crisis<sup>127</sup> for higher education researchers. This is the result of legitimisation symbols for quality research, such as publications and research grants awarded, being transformed into indicators of ‘market’ success for institutional research performance. Researchers themselves have an obligation to address this crisis by reappropriating<sup>128</sup> the legitimisation and reward structures that facilitate effective research practice. If the social relations and practices which sustain the diversity of knowledge-oriented activities are not recognised and supported, the motivation to seek identity enhancement by conforming to the norms of the respective knowledge domains must also be diminished. In this case, it is not unreasonable to expect that legitimisation and reward will be sought where it is more readily available, in avenues such as consulting or a move to more commercial, short-term applied research activities. It is in this sense that the current legitimisation and reward structures for higher education research also predispose researchers to motivation crises, because occupational motivation<sup>129</sup> is intimately linked to criteria for legitimisation. In the traditional domain of academic pursuits, the core of prestige and status is a combination of one’s contribution to the pursuit of knowledge within the field of research, and the extent of one’s network of professional ties outside this field.<sup>130</sup>

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126 Becher, T. (1989) op. cit., p.169.

127 Habermas, J. (1987) op. cit., p.143

128 Pusey, M. (1987) *Jurgen Habermas*, Ellis Horwood, Chichester, England, p.107.

129 Habermas, J. (1982) op. cit., p.280.

130 Becher, T. (1989) op. cit., p.59.



Higher education researchers are particularly at risk with regard to legitimisation crises, because of the performance-oriented coupling of institutional infrastructure funding to direct funding from the system of competitive research grants.<sup>131</sup> This link has serious implications with regard to the ability of the system to recognise, legitimate and reward the activities that support intellectual endeavour because, in the greatly expanded system, the capacity to fund quality research is very limited.<sup>132</sup>

The reason that the system of research funding has become so highly competitive is that the Government and institutions have had to reconcile unprecedented growth in the number of researchers applying for grants, with policies of selectivity and concentration. The level of competition for funding has created a crisis because the percentage of ARC research applications that can be funded is so low. Reward and recognition from this particular source is very restricted. In 1993, only 540 new projects out of a total of over 2,800 applications were able to be funded. This represents a success rate of 19 per cent. The funds are spread so thinly across the system that 'Many "marginally funded" grants from the ARC and NH&MRC [National Health & Medical Research Council] are failing to meet, not only the full direct costs of the research, but also the real incremental costs.'<sup>133</sup> ASTEC,<sup>134</sup> indicated that while the percentage of NH&MRC grant applications funded was higher than that for the ARC, researchers operating under this granting system were also often greatly restricted in terms of technological and personnel infrastructure provision.

The inability of the Government to fund adequately the range of quality research in higher education, demonstrates that the system of funding in the way it is structured, creates

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<sup>131</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op. cit.

<sup>132</sup> Ibid., pp.13-15.

<sup>133</sup> Australian Science and Technology Council (ASTEC) (1991) *Funding The Fabric: Should Commonwealth Government Competitive Research Granting Schemes Contribute More To Research Infrastructure Costs?*, Occasional Paper No. 14, Australian Government Publishing Service, February, p.20.

<sup>134</sup> Ibid.

what Habermas<sup>135</sup> would describe as patterns of privilege. These patterns are linked ultimately, through the infrastructure funding mechanisms and institutional profiles, to the government 'utility' and 'accountability' agendas. In seeking to steer higher education research towards utilitarian agendas, the Government risks threatening the self-sustainability of knowledge-generating communities. With the current climate of fiscal constraint, it cannot be taken for granted that knowledge communities are a renewable resource. Becher,<sup>136</sup> when commenting on the work of Rothblatt,<sup>137</sup> confirmed this risk when he observed that too liberal a degree of outside involvement in determination of research activity, served to undermine an academic's professional expertise. The professional identity and authority that academics develop through their involvement in the social relations and practices of their particular field of knowledge, is the source of their knowledge 'capital' and personal prestige.<sup>138</sup> There is a problem if legitimization and reward systems support only the application of knowledge and take for granted the renewal and growth of knowledge capital. The danger is, that if motivation for commitment to continuing growth of knowledge is uncoupled<sup>139</sup> from criteria for legitimization and reward, researchers could be alienated from the source of their intellectual capital.

The present study, through collaborative analysis of five different research environments, seeks to understand better the conditions for learning resulting from policy-led changes to legitimization and reward systems. When viewed from the perspective of those directly involved in research processes, the impact of strategic action on the part of Government is an indication of the efficacy of policies which purport to value quality research.

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<sup>135</sup> Habermas, J. (1987) *op. cit.*, pp. 348-350.

<sup>136</sup> Becher, T. (1989) *op. cit.*, p.168.

<sup>137</sup> Rothblatt, S. (1985) quoted in Becher, T. (1989) *op. cit.*, p.168.

<sup>138</sup> Becher, T. (1989) *op. cit.*, pp.58-60.

<sup>139</sup> Habermas, J. (1987) *op. cit.*, p.263.

## The Suitability of New ‘Utility’ Design for Legitimizing and Rewarding Quality Research

The foregoing discussion explains how the response of the Australian Government to contemporary social and economic pressures, was translated into research policy directives that privilege accountability in the form of economic and social utility. These policy directives, contained in the Dawkins papers, created strategically-determined structures of relevance for researchers.<sup>140,141</sup> The overall aim of Government had been for structural reorganisation of the system of higher education in ways that ensured innovative academic pursuits would support its utility-focused ‘vision’ for research. However, the introduction of new structures of relevance necessarily involved significant changes in the framing of standards for quality higher education research. The Department of Employment, Education and Training *National Report on Australia’s Higher Education Sector* observed that;

. . . the Government has presented a range of guidelines which have had a powerful influence on the nature and organisation of research. The guidelines have been developed around Government policies of increasing the relevance of higher education research, establishing research priorities; increasing competitive funding, greater selectivity and concentration, and improved accountability.<sup>142</sup>

The structures of reward and recognition to which researchers are now obliged to respond are those which reflect the Government’s framing of quality of research as ‘effectiveness’ and ‘efficiency’ in productivity.<sup>143</sup> The Government’s theory of action

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<sup>140</sup> Dawkins, J.S. (1988) op. cit., p.10.

<sup>141</sup> See Marsh, A., Turpin, T. & Hill, S. (1992) op. cit.

<sup>142</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.246.

<sup>143</sup> Dawkins, J.S. (1988) op. cit., p.11.

for higher education research serves to ensure its own economic and political survival. As a Government, it has an obligation to respond in policy terms to perceived economic development imperatives. However, the socio-economic utility agenda does not represent, in its current form, the interests of researchers as stakeholders in research processes. The new structures of relevance are grounded in economic rationalist values of efficiency and cost-effectiveness<sup>144</sup> as the central measures of accountability. While Dawkins proposed that institutions were now to be funded on the basis of ‘ . . . merit and achievement rather than historical precedent and arbitrary classification,’<sup>145</sup> it is the definition of ‘merit’ that remains problematic.

The HEC,<sup>146</sup> following on the ideas of Westerheijden, proposed that the only way to make sense of the variety of perspectives on what constitutes quality in higher education is through the stakeholder concept.<sup>147</sup> As discussed in Chapter 1, stakeholders’ claims regarding the value of higher education research are linked directly to their understanding of the nature of the activity, and the purposes which the activity serves for them. The stakeholder framework can, therefore, have certain drawbacks with regard to criteria for legitimation and reward of practice. According to Guba and Lincoln,<sup>148</sup> it is important for heuristic purposes, to distinguish between questions of merit and questions of worth. These researchers proposed that there are two senses in which an activity or entity may have value. ‘On the one hand, the [activity or entity] . . . may have value of its own, implicit, inherent, independent of any possible applications.’<sup>149</sup> Guba and Lincoln term this type of intrinsic value, *merit*. On the other hand, value may be attributed to an

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<sup>144</sup> Alford, J. (1992) *Performance Monitoring in the Public Service: A review of Concepts, Developments and Issues*, Working Paper No. 9, Graduate School of Management, University of Melbourne, Victoria, p.5.

<sup>145</sup> Dawkins, J. S. (1988) op. cit., pp.10 and 29-30.

<sup>146</sup> Higher Education Council (1992c) op. cit., p.9.

<sup>147</sup> Westerheijden, D. F. (1991) op. cit., p.3.

<sup>148</sup> Guba, G. E. & Lincoln, Y. S. (1981) op. cit., pp. 45-46.

<sup>149</sup> Ibid.

activity or entity because of its utility within a context of use. The value in this sense is context-determined according to its utility for a particular sphere of social interests.

Judgments concerning the 'worth' of an activity or entity, therefore, are necessarily located within a particular theory of action. Judgments of worth can be highly variable in that they relate to a particular context of interaction. Worth criteria, because they are context-dependent, can also alter rapidly with changing social or economic conditions. The utility-oriented theory of action currently framing higher education research is biased necessarily in favour of 'worth' criteria. The more stable merit criteria sustaining the integrity and identity of research practice as a sphere of social life, serve only as the background to worth considerations in current quality appraisal standards. Worth criteria are now the primary standard for quality appraisal, with objective, measurable outputs and performance-oriented appraisal, increasingly dominating legitimation and reward practices.

There is strong evidence, since the publication of the Dawkins papers in 1988 and 1989, of an intensification of interest in measurable outputs for research. This is demonstrated in the burgeoning studies in publication and citation counts as a 'measure' of an institution's research performance. These have included, in particular, the publications of the Performance Indicators Project, headed by Bourke, at the ANU Research School of Social Sciences,<sup>150</sup> and the National Board of Employment, Education and Training commissioned report<sup>151</sup> on *Quantitative Indicators of Australian Academic Research*.. While the increasing use of bibliometric data carries with it a range of problems,<sup>152</sup> there

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<sup>150</sup> Bourke, P. & Butler, L. (1994) *A Crisis for Australian Science ?* ANU Performance Indicators Project, Internal publication, Monograph Series No.1, Research School of Social Sciences, The Australian National University, Canberra.

<sup>151</sup> Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) *Quantitative Indicators of Australian Academic Research*, Commissioned Report No. 27 to the National Board of Employment, Education and Training, AGPS, Canberra, April.

<sup>152</sup> Committee of Review Higher Education Research Policy (Smith Committee) (1989) op. cit., pp.103-104,

is a particular concern with the use of unqualified quantitative data representing what is essentially a transformational, process-oriented activity, such as research. The Smith Committee cautioned, in 1989, that any output measures of research must be assessed in the context of facilities available,<sup>153</sup> but the publication and citation data are rarely qualified, for appraisal purposes, by the level or type of infrastructure provision provided for the research concerned.

When judgments are made concerning the value of research activity as a particular form of social life, the way in which merit criteria have been assimilated to worth criteria creates more than just a dilemma for researchers. Regardless of the individual's academic merit or intellectual capital, their work has little symbolic value unless it is exchanged for the research dollars which bring with them the infrastructure loading that is valued by their host institutions. The limited capacity of the system to recognise and reward research excellence, means that access to 'legitimation' is increasingly being denied to many academics in higher education research practice.

While Dawkins does acknowledge 'the system as a whole is faced with an array of often diverse and competing pressures and demands,'<sup>154</sup> the specific implications of these demands, for researchers, is a central concern for this study. Jagtenberg, a researcher in the sociology of science, foreshadowed the current dilemma for researchers when he articulated the clear links between the multiplicity of 'demands' and 'legitimacy crises' in the research enterprise. He framed this ongoing and potentially destructive tension as the pull between conflicting values and priorities of different reference groups. Because of these conflicts, researchers are placed in a position where they are forced to alternate between contexts of research and contexts of legitimation.<sup>155</sup>

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<sup>153</sup> Ibid., p.103.

<sup>154</sup> Dawkins, J. S. (1988) op. cit., p.9.

<sup>155</sup> Jagtenberg, T. (1983) *The Social Construction of Science: A Comparative Study of Goal Direction, Research Evolution and Legitimation*. D. Reidel, Holland, p.60.

The Research Grants Committee (RGC) of the ARC was asked to advise on how the traditional academic practices of the peer review process could be modified to orientate towards 'merit'. In their considerations, the RGC defined merit, *not* as 'intrinsic quality', but as, '... the likelihood that the research will result in outcomes of benefit to the community at large.'<sup>156</sup> It appears in this statement, that the translation of merit into worth criteria, is a *fait accompli*. The 'merit' review proposed by the ARC was to be carried out in addition to review of 'intrinsic qualities [to be] addressed by peer review.' In the context of its March 1992 Mission Statement, the standards by which the RGC was to judge 'merit' were;

- Contributions to the quality of Australian culture,
- Graduates of high quality,
- Direct applications for research results,
- Increased institutional capacity for consulting, contract research and other service activities, and
- International links.

Brennan, the Chairperson of the Research Grants Committee at the time of the foregoing statement, admitted that; 'In a very crude and limited sense, it is a question of how much weighting to give 'excellence' and 'relevance'.<sup>157</sup> In the case of the ARC's 1992 Mission Statement, 'merit' was equated with 'relevance', and it was 'relevance,' in the language of the Dawkins policy statements, which meant 'utility' for social and economic progress.

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<sup>156</sup> Australian Research Council (1993) *Newsletter* No. 5, April, p.1.

<sup>157</sup> Brennan, M. (1993) 'Chairwords' in Australian Research Council *Newsletter* No. 5, April, p.1.

The ARC, in its 1994 report, *The Strategic Role of Academic Research*,<sup>158</sup> demonstrated that the overriding theme of socio-economic utility was steering research policy for higher education. The report refers to the principles which frame Science and Technology policy in the 1993-94 Budget Statement. These principles described the Government's vision for the Australian higher education research enterprise. The vision was that Australia would be able to capture the 'benefits of a strong scientific . . . base to provide economic prosperity, social equity, ecologically sustainable industries and a high quality, fulfilling lifestyle'. But this same report warned that, '. . . there are many pathways between basic research and the realisation of national objectives in cultural, social and economic development.' The ARC noted that the pathways were many and varied and involved complex national and international linkages. The ARC advised that;

[t]he realisation of the full potential of the strategic role of basic research in achieving national objectives requires a judicious mix of serendipity through the support of free-ranging curiosity-motivated research and the management of resource allocation for basic research which takes account of international and national imperatives.<sup>159</sup>

The merit of the Government's hoped for national social and economic progress, even given the ARC's confusion between merit and worth, is unproblematic. However, one of the difficulties is that Government priorities regarding what counts as social and economic progress are established within a relatively short-term focus. In this case, the 'relevance' or 'utility' of activities in particular spheres of social life have to be considered in a three-year time-frame. The Australian Science and Technology Council observed that 'Australia goes to the polls at least every three years.'<sup>160</sup> If a Government

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<sup>158</sup> Australian Research Council (ARC) of the National Board of Employment, Education and Training (1994) *The Strategic Role of Academic Research*, AGPS, Canberra, February, p.8.

<sup>159</sup> Ibid., p.vii.

<sup>160</sup> Australian Science and Technology Council (1990) *Setting Directions for Australian Research: A Report the Prime Minister by the Australian Science and Technology Council in association with the Australian Research Council*, June, AGPS, Canberra, p.65



is to be seen as accountable, then it is reasonable to expect that there will be pressure to adopt priorities that enhance its demonstrated success in fulfilling its obligations to the electorate. As noted by ASTEC, ‘ . . . Government in one form or another plays a very large part in the performance and funding of research in Australia, and, therefore, has a special responsibility to ensure that funds are allocated effectively and spent efficiently.’<sup>161</sup> It could be argued that it is this type of pressure that lies behind the ARC’s transformation of ‘merit’,<sup>162</sup> as judged by peer review’, to ‘relative merits’<sup>163</sup> in terms of utility. ASTEC suggested that the flow-on effect from such pressures would impact on decision-making and priority-setting at all levels of the system.<sup>164</sup> This flow-on effect implies that the utility and accountability agendas are steering Government funding agencies, institutions and researchers themselves, inexorably towards a greater reliance on performance-based appraisal systems.<sup>165</sup> The following chapter analyses how and why these changes to academic legitimation and reward systems at the level of the institution are proving a poor fit for higher education research.

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161 Ibid., p.16.

162 Ibid., p.56

163 Ibid.

164 Ibid.

165 Department of Employment, Education and Training (1995) Report of the Committee of Inquiry, *Review of Higher Education Management* (Hoare Report), AGPS, Canberra.

## CHAPTER 3

### THE INSTITUTIONS RESPOND - AN EMERGING COALITION OF INTERESTS IN REWARD AND LEGITIMATION STRUCTURES

This chapter describes how funding arrangements were used in the Australian system as the ‘primary lever for reform’<sup>1</sup> in the first wave of system change, and the impact on research of the manner in which institutional administrators chose to respond to these new arrangements. The reform of purposes to be served by higher education research has been brought about, in large part, by the contrived translation of symbols for individual academic merit into symbols of institutional market success. This translation would have been difficult to achieve had it not been for the coalition of interests which emerged between Government and institutions. Through manipulation of legitimation and reward structures for research, the coalition of interests has resulted in distortion of the meaning of research ‘merit’ at the level of the institution. What these policy moves have meant in practice is the uncoupling<sup>2</sup> of legitimation and reward structures from the systems of action that sustain the social relations of knowledge production.

#### Strategic Action in the Interests of Government

With the abolition of the binary system, ‘the Relative Funding Model (RFM) was introduced to assess the relative funding needs of institutions, based on their teaching and research activities.’<sup>3</sup> From 1989, each institution was to be allocated a single operating grant to replace the existing general recurrent, equipment, minor works and special research grants. A reserve fund (the National Priority Reserve Fund), comprising one

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<sup>1</sup> Dawkins, J. S. (1987a) op. cit., p.9.

<sup>2</sup> Habermas, J. (1987) op. cit., p.263.

<sup>3</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.89.

percent of the total operating grant, was to be distributed each year on the basis of the institution's responses to either specific Commonwealth initiatives, or identified areas of national significance.<sup>4</sup> More importantly, however, a proportion of general infrastructure research funding was to be shifted to competitive schemes.

A series of policy 'adjustments' for the funding of higher education research were, with the move to the UNS, included in the major structural transformation of the system. These adjustments progressively shifted the locus of control over internal research funding allocation priorities. Institutions, which had previously been driven primarily by academic or collegiate priorities, became institutions focussed on strategic direction setting. What the Government gave with one hand, in terms of autonomy, it took away with the other, in accountability requirements and in the linking of research infrastructure funding to the institution's overall performance on competitive research funding schemes.

Dawkins indicated in the White Paper that educational profiles were to be the principal means for defining the role of the institution and the basis on which respective institutions received Commonwealth funding.<sup>5</sup> Profiles, as discussed in the previous chapter, were introduced as policy in the Dawkins White Paper of July 1988 and implemented in the 1989-91 triennium. The basis on which institutions were expected to achieve a balance between autonomy and accountability was, according to the Dawkins papers,<sup>6</sup> institutional profiles, with a research component in the form of research management plans. In this respect, profiles served both to define each institution's broad mission and responsibilities, and to establish its particular areas of activity and specified goals. Government, through the medium of profiles and management plans, negotiated agreement with institutions on their proposed 'measures' of achievement. With the original RFM decisions, resources were allocated on the basis of the institution's respective educational and research profiles, rather than on their designated title of

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4 Ibid.

5 Dawkins, J.S. (1988) *op. cit.*, p.29.

6 Ibid., p.30.

Institute of Education or University, and respective student loads. Successive grant load adjustments were made on the basis of these original RFM allocations, with new intakes being funded according to discipline and level of study rather than the pre-UNS, institutional sector category.

The process of adjusting the operating grants of institutions began in 1991 and the adjustment packages were implemented over the 1991-93 triennium.<sup>7</sup> With the introduction of this new funding arrangement, approximately 6.2 per cent of operating grants distributed in accordance with the RFM, was considered to be available for the support of research activities and research training.<sup>8</sup> This nominal percentage was referred to as the research quantum within institutional operating grants. While the research quantum provided certain income, it was an income that offered little flexibility. The limited amount of funds, over and above the salary component, provided only minimal leeway for maintaining or enhancing research environments.<sup>9</sup>

Both ASTEC<sup>10</sup> and the Smith Committee<sup>11</sup> had advocated more direct research funding in order to increase the return to the nation for its substantial investment in higher education research activity. In response to these sets of recommendations, Dawkins ensured that refined funding mechanisms were put in place. With the introduction of profiles and research management plans, the major funding structures for higher education research were being transformed. In order to address more directly the Government's intentions for research, however, there was fine-tuning of the research funding mechanism. This occurred in the form of a parallel development in research

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<sup>7</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.90.

<sup>8</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) op cit., p.10.

<sup>9</sup> Ibid.

<sup>10</sup> Australian Science and Technology Council (ASTEC) (1987) op. cit., p.3.

<sup>11</sup> See Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) op. cit., p.85.

infrastructure funding. It was this development, in particular, which would alter significantly, the balance between direct and indirect allocations of research infrastructure funds, across the UNS. The rhetoric of higher education restructuring that accompanied these changes to funding arrangements centred on increased autonomy for institutions. In practice, the changes meant increased government control of institutional priority-setting.<sup>12</sup>

### **New Reward Structures and the Seduction of Institutions**

In pursuit of more flexible funding mechanisms for research, a percentage of operating grants from the pre-1987 universities was, in 1989, 'redirected' to provide for the competitive or direct funding of research. This funding included postgraduate awards, and research fellowships as well as the research granting schemes.<sup>13</sup> In the 1989-91 triennium the redirection of funds, referred to as the 'clawback', enabled the Government to increase significantly the capacity of the ARC to provide direct support for research across its granting schemes.<sup>14</sup>

While the ARC funds had been boosted, however, the clawback took research funding from the established pre-1987 universities' budgets. The loss to these universities had amounted to nearly 20 per cent of their research expenditure (December 1987 prices).<sup>15</sup> Mechanism A, introduced specifically for the pre-1987 universities, was established in an attempt to placate these established institutions for the loss of infrastructure funding and to secure their support for direct funding of research.<sup>16</sup> Because of the existing research strength of the pre-1987 institutions, mechanism A returned a sizable proportion of the

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<sup>12</sup> Murphy, P., Hill, S., Mendham, T. & Turpin, T. (1992) *op. cit.*, p.11.

<sup>13</sup> Dawkins, J.S. (1988) *op. cit.*, p.83.

<sup>14</sup> Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) *op. cit.*, p.85.

<sup>15</sup> Department of Employment, Education and Training, Higher Education Division (1993) *op. cit.*, p.256.

<sup>16</sup> *Ibid.*, p.259.

clawback to these universities.<sup>17</sup> Mechanism A, however, was only one of a range of funding mechanisms that were put in place in 1989. These mechanisms included:

- Direct funding through institutional operating grants (research-related quantum);
- Infrastructure block grants (Mechanism A to pre-1987 Universities);
- Infrastructure development grants (Mechanism B to post-1987 or new Universities);
- Special large equipment grants;
- Special infrastructure grants to former Institutes of Technology, and infrastructure 'loadings' attached to ARC grants to former Colleges of Advanced Education.<sup>18</sup>

The introduction of these mechanisms served to enhance greatly the Government's capacity to fund research across the UNS. However, through designated priority areas, the implementation of these funding mechanisms also increased the steering of research priorities by the Commonwealth Government. The designation of priority areas served to strengthen the Government's level of influence, through the large grants scheme, on the contribution of higher education research to national development. The following areas were identified in 1990 as holding promise of significant growth in the immediate future and/or having special significance as areas of enquiry for some aspect of national life. The priority areas included;

- Materials science, including aspects of minerals processing;
- Scientific instruments and instrumentation;
- Cognitive science;
- Molecular approaches to the management of Australia's biological resources; and
- Australia's Asian context.<sup>19</sup>

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<sup>17</sup> Ibid., p.273.

<sup>18</sup> Murphy, P., Hill, S., Mendham, T.& Turpin, T. (1992) op. cit., p.7.

<sup>19</sup> Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.249.

With the pressure on institutions to gain competitive grants, the opportunity for alignment between institutional research priorities and the ARC priority areas appear to have been of strategic significance. The environment for 'research choice . . . moved from one largely ruled by individual autonomy and local institutional decision about priorities, to one that [was] embedded in centralised policy and competitive institutional processes.'<sup>20</sup>

The clawback of research funds served remarkably well in achieving the Government's dual goals. These goals were to raise the level of interest in research across the UNS, and to achieve a closer alignment between research activity and broader national objectives.<sup>21</sup> Supplementary infrastructure funding was, by this means, linked directly to the institution's share of Commonwealth grants. It was this untied infrastructure funding that afforded institutions the flexibility and autonomy of decision-making for their support of research activity, that had been lacking in other funding mechanisms. Paradoxically, it was also this particular funding mechanism of untied infrastructure provision which seduced institutions into transforming traditional indicators of research merit into indicators of market success.

The new competitive funding arrangements included thirty-eight Commonwealth Competitive Grants Index (CCGI) schemes, to which applications could be made for direct funding of research. Hill<sup>22</sup> proposed that although the funding from these schemes amounted to only 13 per cent of the monies spent on research in higher education, their steering power was quite disproportional to the percentage of total funding. This was because the 'award of grants signalled the level of competitiveness of the institutions that gained funding classified under the CCGI . . .'<sup>23</sup> The flow of infrastructure back to the

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<sup>20</sup> Hill, S., & Turpin, T. (1992) op. cit., p.6.

<sup>21</sup> Dawkins, J.S. (1988) op. cit., pp.80-83.

<sup>22</sup> Hill. S. (1993b) op. cit., p.183.

<sup>23</sup> Ibid.

institutions was directly proportional to their CCGI success<sup>24</sup> (now known as National Competitive Grants Index, NCGI success).

### Strategic Action in the Interests of Institutions

The authors of the 1991 ASTEC report on infrastructure funding had noted that, ‘Ten years ago, Commonwealth competitive research granting schemes were, in budgetary terms, marginal to the national research effort’.<sup>25</sup> Competitive schemes in the 1990s, however, were playing an increasingly significant role in ‘shaping the character of R&D (Research and Development) performed with Commonwealth government funds.’<sup>26</sup> Hill<sup>27</sup> confirmed the influence of the new funding arrangements on research practice in higher education. He highlighted the role of the CCGI, with its one-to-one infrastructure weighting, and the way in which institutions were effectively transforming ARC recognition of research excellence into ‘institutional income’. In the same paper, Hill also observed that ‘CCGI *income*, in particular ARC funding, has been elevated within most of the institutional reward structures inside the new university system as a single criterion of research excellence and desirability.’<sup>28</sup> Reports such as the following demonstrate how institutions appropriated successful grantsmanship as an indicator of excellence.

Melbourne University has been confirmed as the premier research institution, holding its top spot from last year, according to a new ranking from the Australian Research Council. . . . The ranking . . . [is] according to each university’s position on the competitive grants index.<sup>29</sup>

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<sup>24</sup> Committee to Review Higher Education Research Policy (1989) B. Smith (Chair) op. cit., p.64.

<sup>25</sup> Australian Science and Technology Council (1991) op. cit., p.19.

<sup>26</sup> Ibid.

<sup>27</sup> Hill. S. (1993b) op. cit., pp.185-186.

<sup>28</sup> Hill. S. (1993b) op. cit., p.185.

<sup>29</sup> Matchett, S. (1993) ‘Melbourne retains top research spot’, *The Australian Higher Education Supplement*, 5 May, p.15.



The linking of infrastructure funding to CCGI success meant that research *income* became, for institutions, *the* criterion for research performance. ‘Now, . . . a grant implied considerably more than just direct funding of research costs’.<sup>30</sup>

Research funding policies have been effective as steering mechanisms to the extent that they have shaped the legitimation and reward structures emerging as the preferred options for recognition within institutional settings. For academics, the outcomes of research pursuits have traditionally been seen, not as an end in themselves, but as a means both to professional achievement and the prestige which attaches to their academic output. Institutional administrators, in coalition with government, have capitalised on this desire for ‘prestige’ and recognition, by transforming academic ‘success’ into institutional success in research funding. It could be argued, therefore, that the capacity for academics involved in research to maintain a balance between activities required for self sustainability and activities that respond to utility requirements, will be strongly influenced by institutional priority-setting and resource allocation decisions.

The strong pressure on higher education institutions to attract research grants through their ‘best’ researchers is, as discussed previously, a pressure generated in large part by the ‘clawback’ of research funding, and the new infrastructure funding arrangements. The institutional response to the government’s policy imperatives has been to adopt a policy of ‘picking winners’. This practice has raised significantly the symbolic significance of CCGI grants within the lives of researchers.<sup>31</sup> By providing a listing of grants that attract infrastructure funding, the CCGI has provided both a framework for negotiating priorities and a mechanism for guiding the strategic action of institutional managers.

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<sup>30</sup> Hill. S. (1993b) op. cit., p. 183.

<sup>31</sup> Ibid., p.186

As a result of the pressure for institutions to 'perform', the institutionalisation of competition, concentration, and selectivity, has become the hallmark of the new structures of relevance for research communities<sup>32</sup> and proof that senior administrative managers have adopted good management practices within their institution.<sup>33</sup> It is these organising principles of competition, concentration and selectivity that have come to define the shape of 'effective' research environments. Researchers have had to reconsider the criteria by which they judge the merit and worth of activities that constitute their research processes and research outcomes. In a Report on the Research Centre Program, Turpin observed that;

Research Centres' Programs are a dynamic force in the changing research focus and orientation in the higher education system. They are contributing to the emergence of multidisciplinary fields by shifting the research focus from traditional departmental and discipline bound areas to commercial and multidisciplinary research areas.<sup>34</sup>

This diversion of researchers into multidisciplinary teams, however, is causing strains within traditional discipline areas. These strains have appeared as resources are redirected to support the, now preferred, organisational options for research. Whether the resultant tensions are creative and productive or constraining and undermining for research practice, will, to a large extent, depend on the way in which host institutions choose to mediate the system's imperatives. Institutional managers and administrators, including Vice Chancellors, Deputy Vice Chancellors, Pro-Vice Chancellors and Deans, acted strategically to orientate their support for particular types of initiatives and organisational forms. These organisational forms and initiatives were the ones most likely to attract an increased share of funding through the institution's responses to

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<sup>32</sup> Liyanage, S., Mitchell, H. & Jones, A. (1991) *Australian Research Centre Program: Research Concentration in Australian Higher Education Institutions*, Report No.3, December, Centre for Research Policy, University of Wollongong, Wollongong.

<sup>33</sup> Bessant, B. (1995) *op. cit.*, p.61.

<sup>34</sup> Liyanage, S., Mitchell, H. & Jones, A. (1991) *op. cit.*, pp.31-32.

changed legitimization and reward structures. This strategic action is evidenced in the observation by McNicol, Vice Chancellor of Sydney University, with that institution's response to the funding of new intakes according to level of study.

The general impression from the changes in [student] load data is that universities are in the process of exchanging relatively cheap undergraduate load for relatively expensive higher degree load and that these changes are occurring most rapidly in the former college sector.<sup>35</sup>

Further, the 'concentration' and selectivity' drive fostered an unprecedented growth in research centres of varying levels of focus on research, with the result that there was a cementing of the coalition of interests between government and institutional management. The authors of a report on the research centres program noted that the;

[r]apid growth of research centres in academic institutions has given a new orientation to academic research by shifting the focus from traditional 'knowledge base' development activity to encompass research with a more commercial orientation.<sup>36</sup>

The establishment of research centres in institutions served to expand the Government's already substantial investment in higher education research.

The growth in research centres was in part, an expression of the move towards a more commercial orientation in higher education research pursuits. However, this was not the only purpose served by the striking phenomenon of structural reorientation in the 1980s. Initiated by *CTEC Report for the 1982-84 Trinennium*, in the concept of Centres of Excellence, both the idea and the funding that followed also proved to be highly attractive to those involved in research in higher education.<sup>37</sup> It was apparent that important

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<sup>35</sup> McNicol, D. (1992) op. cit., p.19.

<sup>36</sup> Liyanage, S., Mitchell, H. & Jones, A. (1991) op. cit., p.iv.

<sup>37</sup> Department of Employment, Education, and Training, Higher Education Division, (1993) op. cit., pp.261-264.

synergies existed between the Government's push for selectivity and concentration and the desire on the part of researchers to further their research interests. In research centres, these interests could be pursued with relative freedom from teaching structures, teaching commitments and resource restrictions.<sup>38</sup> The bonus for Government was that the basis on which both Key Centres for Teaching and Research and Cooperative Research Centres were established, enhanced the relevance and utility of the research effort. It is evident from the 'centres phenomenon'<sup>39</sup> across the system, that the changed legitimisation and reward structures were, as ASTEC had predicted, creating a flow-on effect with regard to decision-making and priority-setting at all levels of the system.<sup>40</sup>

The principal challenge for both institutional and research managers was to keep abreast of changing priorities in direct competitive funding, likely directions of granting bodies, and external imperatives associated with cooperative research centre funding. In this respect, institutions were given greater autonomy and responsibility for management and direction-setting, but at the same time were drawn much more firmly into the steering influence of government.<sup>41</sup>

The Research Grants Committee of the ARC commented itself, that 'the research grants process is [now] one of picking winners, encouraging collaborative research, and concentrating on grant size.'<sup>42</sup> The proportion of research expenditure for all higher education institutions derived from direct funding sources has increased markedly. This direct funding excludes, of course, the 'imputed' component of operating grants for research in percentage terms for all institutions and the ANU Institute of Advanced

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<sup>38</sup> Hill. S. (1993b) op. cit., p.183.

<sup>39</sup> Marsh, A., Turpin, T. & Hill, S. (1992) op. cit., pp.13 & 26.

<sup>40</sup> Australian Science and Technology Council (1990) op. cit., p.56

<sup>41</sup> Hill. S. (1993b) op. cit., p.183.

<sup>42</sup> Research Grants Committee of the Australian Research Council (1993) P.W. Sheehan (Chair) op. cit., p.4.

Studies [funded by a block grant]. Between 1981 and 1991, direct funding of research rose from 68 per cent to 89 per cent of all research funding.<sup>43</sup> The pressure, therefore, for institutions to gain CCGI grants, is pervasive and this pressure has increased considerably since the inception of competitive funding mechanisms.<sup>44</sup>

Hill<sup>45</sup> warned of the hidden dangers of this move towards the marketplace. These dangers included the redefining of both the role and purposes of higher education practice. He commented that, 'The visionary power of science can become mediated by markets and short-term market values . . .'. He further suggested that, ' . . . human visions of society in the next century may only be seen through the prism of the marketplace values and systems. Running towards a precipice with our eyes focused on our hip pockets is an inherently risky activity'.<sup>46</sup>

### **Seeds of Discontent in the Coalition of Interests**

The contradiction inherent in the Government's theory of action for higher education, particularly as it affects research, has created a dilemma for institutional administrative managers. Their responsibility as mediators of the system's imperatives makes it difficult for them to fulfil their obligations to either the members of their academic communities or to Government as their funding agency.

The function of the institution as a bureaucratic organisation is, according to the social anthropologist Douglas,<sup>47</sup> to offer employment relations that 'produce trust, develop

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<sup>43</sup> Department of Employment, Education, and Training, Higher Education Division (1993) op. cit., p.256.

<sup>44</sup> Research Grants Committee of the Australian Research Council (1993) P.W. Sheehan (Chair) op. cit., p.4.

<sup>45</sup> Hill, S. (1993a) op. cit., p.64.

<sup>46</sup> Ibid.

<sup>47</sup> Douglas, M. (1992) *Risk and Blame: Essays in Cultural Theory*, Routledge, London, p.71

expertise, and provide flexible continuity'.<sup>48</sup> Douglas maintained that the bureaucratic organisation is sustained through the designation of legitimate authority and because its members receive selected benefits, in exchange for protection from external threats to their sphere of social life. Alternatively, Douglas,<sup>49</sup> proposed that the function of the institution in a competitive funding environment is to encourage individuals to seek personal gain, to enter into contracts that will secure funding, and to promote individuals capable of securing personal advantage through their academic excellence.<sup>50</sup> A market-oriented organisation is sustained by the success and the enhanced status of those individuals with the greatest socially-recognised capital.

In bureaucratic and market frameworks, both relevant action and the organisation of social relations are described and justified in quite different ways. The differences between the frameworks within which legitimation is decided mean that 'no speaker in one type of systematic interactions can appeal to the justifying principles which uphold [the other type] . . . without landing in contradiction.'<sup>51</sup> This dilemma is inherent in the dynamics of a competitive funding system for higher education, when the capacity of the system to recognise and reward excellence is limited under conditions of fiscal constraint.

Maassen and van Vught, researchers in higher education policy, noted that developments in the organisation and governance of higher education during the 1980s and 1990s have;

. . . combined two fundamentally different theoretical conceptions. In [strategies which have been adopted] the classical model of detailed planning and control are combined with aspects of the natural selection model. The result is a strange hybrid . . .'<sup>52</sup> [in which the theories of action are at odds with the practice.]

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48 Ibid.

49 Ibid., p.61.

50 Ibid.

51 Ibid., p.137.

52 Maassen, P. A. M. & van Vught, F. A., (1988) *An Intriguing Janus-Head: The Two Faces of the New Governmental Strategy Towards Higher Education in the Netherlands*, Higher Education Policy Studies, Publication No.58, Centre For Higher Education Policy Studies, University of Twente, Enschede, January, p.9.

Marceau,<sup>53</sup> reviewed the policy-led changes which have taken place in higher education's move towards a more market-orientated environment. She observed that ;

[c]ompetition for funds from a relatively shrinking public purse increases pressure for quantifiable outputs as a legitimatising device, invites tighter controls on accountability in spending . . . and generates a new spirit of 'managerialist' governance.<sup>54</sup>

Marceau confirmed that institutions must now compete amongst themselves for a share of resources. In order to increase their chances, they must also 'respond to administrative and market signals about desirable directions to take.'<sup>55</sup> This experience is common throughout OECD countries and means that institutions have not only had to do things differently, but have also had to 'find new ways to justify their use of both private and public funds.'<sup>56</sup> When Australia is compared with other OECD countries, however, these pressures are amplified. The comparatively dominant position of Australian government, particularly the Commonwealth Government, in provision of research and development funding,<sup>57</sup> is the basis of this amplification of impact on the higher education system. For example, in 1991, when funding sources such as State, business and other contributors were considered, the Commonwealth Government had provided some 90 per cent of the research funds received by higher education research.<sup>58</sup> This funding however, had come at a price. Hill observed that, ' . . . what had fundamentally changed [with the Dawkins initiatives] was the locus of decision-making. The universities had lost discretion over research funding allocation to a central competitive funding system.'<sup>59</sup>

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53 Marceau, J. (1993) op. cit., p.3.

54 Ibid.

55 Ibid., p.6.

56 Ibid., p.4.

57 Department of Employment, Education and Training, Higher Education Division (1993) op. cit., p.247.

58 Ibid., p.252.

59 Hill. S. (1993b) op. cit., p.183.

When outlining Higher Education's Contribution to socio-economic development, Dawkins assured the higher education system that, 'The Government [has] . . . no intention of dictating [what] research institutions are to undertake . . . ' <sup>60</sup> A follow-up ministerial statement by Baldwin, the then Minister for Higher Education and Employment Services, confirmed that ' . . . the Government [is] . . . not seeking to impose a uniform model of corporate management on the system, to the detriment of concepts of collegiality'. <sup>61</sup> Notwithstanding such assurances, however, the funding mechanisms and organisational structures outlined in the Dawkins papers <sup>62,63</sup> set 'national needs', albeit the government's interpretation of national needs, as one of the key determinants for the funding of research activities. As Maassen and van Vught noted in their review of higher education policy developments in the Netherlands:

In the new strategy the autonomy of the institution is a restricted autonomy. . . The structural order and the specialisations in the system to a large extent are an outcome of the various decisions and actions of government, aimed at the optimization of the system from the government's point of view. <sup>64</sup>

The paradox between minimalisation of Government control and a more powerful and pervasive steering of action at the institutional level <sup>65</sup> is manifested in the tension between autonomy and accountability. It is up to the institutions themselves to attain a competitive advantage through their top researchers. <sup>66</sup> Furthermore, institutions must, in the current research funding environment, demonstrate their accountability through annual

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<sup>60</sup> Dawkins, J.S. (1989) op. cit., p.2.

<sup>61</sup> Baldwin, P. (1991) op. cit., p.31.

<sup>62</sup> See Dawkins, J.S. (1988) op. cit.

<sup>63</sup> See Dawkins, J.S. (1989) op. cit.

<sup>64</sup> Maassen, P. A. M. & van Vught, F. A. (1988) op. cit., p.9.

<sup>65</sup> Fitzsimons, P. (1994) 'The Management of Tertiary Educational Institutions in New Zealand', Paper presented to Foucault: The Legacy Conference, Ramada Hotel, Surfer's Paradise, Australia, 4-6 July.

<sup>66</sup> Dawkins, J.S. (1989) op. cit., p.2.



expenditure reporting for received funds.<sup>67</sup> Increased competition for research funding in the UNS, however, has ensured that demand for research funds far exceeds supply. In effect, the Government has adopted a para-market strategy.<sup>68</sup> The ARC has become the quasi consumer<sup>69</sup> for research proposals, in exchange for academic status, and finance for research.<sup>70</sup> These are the rewards that are both sought after and scarce in the competitive market place of research funding. This situation has had a negative impact on the potential for recognition of excellence in higher education research communities. The Research Grants Committee of the ARC has commented that, 'In the current climate of insufficient resources, some strengths may not be able to be developed no matter how well researchers perform.'<sup>71</sup> As a result of this increased participation<sup>72</sup> in the competition for funds, there has been the lowering of morale amongst researchers.<sup>73</sup> The ARC has expressed concern that if the system continues to be unable to support its best researchers, then this will threaten 'seriously the efficiency of its own processes.'<sup>74</sup>

Both the potential and actual inequities experienced across the system with the competitive funding model were apparent as early as 1993. It was clear that the established pre-1987 universities were well ahead in the funding stakes, on both ARC and NH&MRC competitive research grants awarded.<sup>75</sup> The Government indicated its

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<sup>67</sup> Dawkins, J.S. (1988) op. cit., p.103.

<sup>68</sup> Harrold, R. (1992) 'Evolution of Higher Education Finance in Australia' in *Higher Education Quarterly*, vol.46, no.4, Autumn, p.329.

<sup>69</sup> Ibid., p.321.

<sup>70</sup> Hill, S. (1993b) op. cit., p.185.

<sup>71</sup> Research Grants Committee of the Australian Research Council (1993) P.W. Sheehan (Chair) op. cit., p.v.

<sup>72</sup> Ibid., p.9

<sup>73</sup> Wood, F. & Harman, G. (1990) 'Academics and Their Work Under Dawkins: A Study of Five NSW Universities', *Australian Educational Researcher*, vol.17, no.2, pp.53-74.

<sup>74</sup> Australian Research Council, Research Grants Committee (1993) Draft Submission to the Inquiry into the Organisation and Funding of Research in Higher Education. *An Analysis of the Demand for Research Support: A Case For Funding of The ARC Large Grants Scheme*, Australian Research Council, Canberra, April, p.v.

<sup>75</sup> Department of Employment, Education, and Training, Higher Education Division (1993) op. cit., pp.273-274.

support for ‘mission-oriented objective sectors’ that attracted a higher percentage of non-Commonwealth funds. The inequities with regard to Commonwealth infrastructure funds, coupled as they were to CCGI research grant success, became obvious. As a partial response to this problem, the Government determined that from 1993, infrastructure funding would be on the basis of success in competitive granting schemes, rather than on the basis of success in sourcing from specified Commonwealth grants. This meant that *all* members of the UNS were now eligible for Mechanism A grants<sup>76</sup>, opening up access to funding. Coincidentally, the Government’s steering capacity of higher education research was also broadened.

With regard to the steering capacity of research funding mechanisms, Bergquist proposed, that politically-motivated policy action is both inappropriate and inadvisable, for higher education research. He stated that;

As directors of research, politicians have obvious limitations. They have a short term horizon, up to three years, [sic] they can be greatly influenced by the media whose time horizon is even shorter, days to weeks. We must recognise that, for the foreseeable future support for scientific research is likely to be conditioned by perceived ‘relevance’ to inward looking, politically generated goals.<sup>77</sup>

Bergquist goes on to advise that those who represent the interests of higher education, have an obligation to influence policies and goals so that they are more appropriately aligned with the development and maintenance of researching capability. In support of this proposition, Bergquist proposes;

We [who have a stake in the research enterprise] all must work to influence these goals. Where, for instance in any priority statement do we see a goal which is to maintain a strong academic capability tailored to produce first class scientists and engineers?<sup>78</sup>

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<sup>76</sup> Ibid., p.266.

<sup>77</sup> Bergquist, P. (1994) op. cit., p.12.

<sup>78</sup> Ibid.

The separation of research infrastructure provision from direct research funding,<sup>79</sup> has raised significant concerns for the sustainability of the quality of higher education research environments.<sup>80</sup> These concerns have arisen because of the level of infrastructure support, proportional to the dollar value of successful research applications through the CCGI scheme.<sup>81</sup> It is not only government priorities, but the institutional response to these priorities, that is problematic. With a greater proportion of infrastructure funding available for discretionary allocation, the potential for institutional priorities to influence research activities also increased. Administrative decisions regarding resource allocation can have a significant impact on who are considered to be the 'best' researchers. It is these decisions, after all, which determine that research will be valued, and financially rewarded, within the institution.

### **New Structures of Relevance for Researchers - The Cost of the Coalition**

Judgments concerning the value of academic activity have traditionally been made on the basis of the integrity or scientific merit of discipline-specific publications, or on public presentations of research outcomes. Becher<sup>82</sup> used the phrase 'lifeblood of academia' to describe the importance of these academic communication patterns to the social relations of knowledge and the legitimation of academic 'capital'. Academic recognition has traditionally come through what was previously conceptualised as invisible colleges<sup>83</sup> of academic domains, rather than from the institution in which the researcher happens to be located at any point in time. In academic pursuits, the social relations of knowledge have

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<sup>79</sup> Dawkins, J.S. (1988) op. cit., p.83.

<sup>80</sup> National Board of Employment, Education and Training (1993b) *Higher Education Research Infrastructure*, AGPS, Canberra.

<sup>81</sup> Australian Research Council, Research Grants Committee (1993) Draft Submission to the Inquiry into the Organisation and Funding of Research in Higher Education, op.cit., p.4.

<sup>82</sup> Becher, T. (1989) op. cit., p.77.

<sup>83</sup> Crane, D. (1972) *Invisible Colleges*, University of Chicago Press, Chicago.

been privileged, and it is towards the standards set by discipline leaders<sup>84</sup> that academic recognition and reward systems have traditionally been orientated. However, in response to policy-determined funding structures, patterns of academic merit in the 1980s and 1990s increasingly are being coupled with patterns of 'worth' and the relations of the market.<sup>85,86</sup> Institutional administrative managers and research managers, as key stakeholders in research outcomes, have played a major part in this reorientation.

Zuber-Skerritt,<sup>87</sup> when reviewing strategies for change in higher education, suggested that with the trend towards 'bureaucratic rationality' in institutions of higher education, academics in general are faced with having to reaffirm or redefine their academic space.<sup>88</sup> Unlike the functions of bureaucratic organisation described by Douglas and noted earlier in this chapter, MacIntyre<sup>89</sup> proposed that bureaucratic *rationality*, in the form of technical, hierarchical thinking directed towards efficiency, serves to dehumanise work and life in academic communities. In responding to changes in their environment that are oriented towards bureaucratic rationality, researchers have been forced to reappraise the criteria by which the merit and worth or quality of their action might be judged. Kemmis, Farral, Baker and Moodie,<sup>90</sup> in their review of research policy, highlighted the potential for distortion of the recognition and reward systems of academic research in the national policy directions. These authors pointed out that while the institutionalisation of research in the University was;

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<sup>84</sup> Becher, T. (1989) op. cit., Ch. 4.

<sup>85</sup> Ziman, J. (1991) 'Academic Science as a System of Markets', *Higher Education Quarterly*, vol.45, no.1, Winter, pp.41-61.

<sup>86</sup> Marginson, S. (1994) 'Image triumphs over substance in slide to a corporate model', *The Australian Higher Education Supplement*, September 28, pp.34-35.

<sup>87</sup> Zuber-Skerritt, O. (1991) *Professional Development in Higher Education: A Theoretical Framework for Action Research*, Centre For The Advancement of Teaching and Learning, Griffith University, Brisbane, pp.160-161.

<sup>88</sup> Ibid.

<sup>89</sup> MacIntyre, A. (1981) quoted in Zuber-Skerritt, O. (1991) *ibid.*, p.159.

<sup>90</sup> Kemmis, S., Farral, L., Baker, L. & Moodie, G. (1984) quoted in Zuber-Skerritt, O. (1991) *ibid.*, p.160.

... positive, because the institution provides a foundation in research and the human and social life of an academic community for the practice of research; [it was also] negative, because the external goods attaching to research tend to become more visible and can dominate the criteria by which success in research is judged.<sup>91</sup>

In the social relations of knowledge production, the type of interactions that are valued are those which support development of shared understanding through persuasion and mastery of transparent and communicative discourses.<sup>92</sup> Dill<sup>93</sup> proposed that it is these collegiate or clan-type relationships, with their consensually developed standards, that are evident in the disciplines and specialities to which academics give their allegiance. Bourdieu,<sup>94</sup> in his analysis of higher education cultures, indicated that the knowledge domain is qualitatively different from that of the market. The two quite differently constituted domains of action differ greatly in the ways in which social interaction occurs. There is also a wide divergence between the respective criteria by which action is considered successful, or recognised as legitimate. Claims about the success of a particular activity in the knowledge domain are made on the type of authority that is derived from cultural capital in terms of the fruitfulness of one's research findings as a basis for furthering the work of other scientists. For example, successful ARC or NH&MRC grant applicants who are oriented towards the knowledge domain would see funding primarily in terms of recognition of scientific merit and/or the capacity to enhance and extend knowledge.<sup>95</sup> Alternatively, claims about the success of research activity in the quasi-market domain of CCGI grants, would be made on the type of authority derived from academic or social capital. In the latter case, successful grant applications would symbolise personal academic status within the immediate academic community, as a consequence of the financial rewards that accrue to the institution.

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<sup>91</sup> Ibid.

<sup>92</sup> Hill, S., and Turpin, T. (1992) op. cit., p.13.

<sup>93</sup> Dill, D.D. (1992) op. cit., p. 53.

<sup>94</sup> Bourdieu, P. (1988) *Homo Academicus*, Polity Press, Cambridge, p.98.

<sup>95</sup> Reif, F. 'The competitive world of the pure scientist' in Becher, T. (1989) op. cit., p.59.

Habermas<sup>96</sup> explained the differences between the two domains by contrasting ‘prestige’ based on personal attributes with ‘influence’ based on the power to control, direct or dispose resources. Prestige, on the one hand, is characterised by attributes that involve strength of will, credibility and reliability. In claims about the value of one’s action, these attributes are indications, inferred Habermas, of cognitive, expressive and moral-practical virtues. On the other hand, ‘property and knowledge are the two most important sources of influence’, that can be used as resources for ‘inducement through the expectation of reward’.<sup>97</sup> In order to coordinate action at more complex levels, such as that of the institution, symbols of academic prestige based on the cognitive, expressive and moral virtues of research excellence, can be replaced by symbols that secure coordination of effort, based on the capacity to attract research dollars.<sup>98</sup> With the current legitimisation and reward structures for higher education research, the institutions, in their coalition of interests with Government, have replaced symbols for academic prestige with symbols of ‘market’ success.

The way in which academic legitimisation and reward systems were structured in the late eighties and early nineties, led one leading science policy researcher to challenge the values driving policy agendas. Ziman<sup>99</sup> questioned whether or not the trend in higher education research was to replace quality with price as the basis for competition and recognition, thus creating a damaging conflict between individual and institutional interests. Horne concurred with Ziman’s comment in his observation that, ‘The . . . problem with the present attitude to research is that it is producing the quite depraved idea that you can judge the value of research by the size of the grants it attracts.’<sup>100</sup>

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<sup>96</sup> Habermas, J. (1987) op. cit., p.181.

<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

<sup>99</sup> Ziman, J. (1991) op. cit., p.41.

<sup>100</sup> Horne, D. (1991) ‘Horne wants knowledge shared around’, *The Australian Higher Education Supplement*, 20 November, p.12.

Habermas explained how it is possible, through the media of money and power, to influence the very nature of the validity claims that are the basis of coordinated action.

Media such as money and power attach to empirical ties; they encode a purposive-rational attitude toward calculable amounts of value and make it possible to exert generalized, strategic influence on the decisions of other participants while *by-passing* processes of consensus-oriented communication.<sup>101</sup>

He went on to explain how this mediatization of the underlying processes of securing agreement for coordinated action, could uncouple action from the structures that define the meaning of the action itself. These structures comprise what Habermas described as the *lifeworld*. The lifeworld is ‘. . . the vast stock of taken-for-granted definitions and understandings of the world that give coherence and direction to our everyday actions and interactions.’<sup>102</sup>

Inasmuch as they do not merely simplify linguistic communication, but *replace* it with a symbolic generalisation of rewards and punishments, the lifeworld contexts in which processes of reaching understanding are always embedded are devalued in favour of media-steered interactions; the lifeworld is no longer needed for coordination of action.<sup>103</sup>

The shortfall in infrastructure, which underpins the extraordinary power of Government steering media for research, is part of the broader issue of research funding shortfalls that have resulted in the mediatization of research excellence. Ziman proposed that shortage of government funding for research is common to the international experience in established systems of higher education. He concluded that;

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<sup>101</sup> Habermas, J. (1987) op. cit., p. 183.

<sup>102</sup> Pusey, M. (1987) op. cit., p.58.

<sup>103</sup> Habermas, J. (1987) op. cit., p. 183.

... concentration and selectivity were simply unavoidable. If research was as important as researchers said it was, and countries wished to remain competitive in research ... they would have to make some decisions about areas they intended to be competitive in, and ensure that these areas had the necessary mass and funding.<sup>104</sup>

A recommendation to Government, from NBEET, to restore the parity between infrastructure support and Commonwealth direct research funding to pre-unification levels, however, failed to win approval. The Government indicated that support was not forthcoming because, '[t]here is no current objective inventory of institutions' infrastructure that indicates its condition and use.'<sup>105</sup> The complexity and diversity of research activities across a wide range of disciplines has served to compound the difficulties in addressing infrastructure shortfalls. The great variations in publication patterns, significance of citation patterns, the level of indirect project funding costs across the system and the completion rates for PhDs, make it extremely difficult to use quantitative performance measures for the purposes of value judgements concerning research. Such difficulties, inherent in performance-based legitimisation and reward systems, underscore the inadequacy of current quality appraisal frameworks for higher education research practice. Performance-based 'measures' cannot provide the type of information needed to demonstrate what it is that researchers do that is of value, and how it is that they coordinate action to ensure sustainability and renewal of innovative capabilities.

In the context of these structural changes to the organisation and funding of research in higher education, researchers have an obligation towards ensuring the provision of physical and cognitive infrastructures if they wish to secure their own sustainability as a

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<sup>104</sup> Ziman, J. (1987) *Science in the Steady State*, quoted in Aitkin, D. (1990) 'How research came to dominate higher education and what ought to be done about it' *Australian Universities' Review*, Nos.1&2, p.11.

<sup>105</sup> Australian Parliament Senate Standing Committee on Employment, Education and Training, *Government Response to Tabled Report No.47/1994*, Report of the Inquiry into the Organisation and Funding of Research in Higher Education, p.5.



sphere of social life. This thesis proposes that in order for researchers to do this, it will be necessary for them to make explicit their physical and cognitive infrastructure needs in research funding negotiations - in short, to identify and communicate the invisible product of their research pursuits. According to Dawkins, the government supports research in order to, among other things; 'enhance national scientific and technological capacity and to create and maintain a reservoir of expertise which can be applied to any problems and opportunities that may face the nation'.<sup>106</sup> However, the synergies that exist between the expectations of government and those of researchers remain obfuscated by the quantitative, performance-oriented appraisal frameworks currently being used for higher education research.

This thesis argues that criteria for ensuring the sustainability and renewal of quality research practice currently remain hidden in the tacit knowledge of researchers. Without access to this knowledge for quality appraisal purposes, it is possible that reward and legitimisation systems will mitigate against the continuing development of researching capability. In essence, it is the nature of quality practice as it relates to research activity and the means by which this practice can be identified and judged, that is the real issue. It is this issue that is addressed in the following chapter.

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<sup>106</sup> Dawkins, J.S. (1988) *op. cit.*, p.89.

## CHAPTER 4

### THE DECADE OF QUALITY - A NEW IMAGE FOR ACCOUNTABILITY

The previous chapter demonstrated how and why universities have adjusted their discourses, practices and social relations to meet the challenges of the new funding structures for higher education research. The transformation process begun in the Dawkins era progressed and matured in the post-Dawkins period of the 1990s, identified as the 'decade of quality'.<sup>1</sup> In the decade of quality, the previous wave of structural change is being followed by a second wave of cultural change in which the Government is using its new 'lever' of quality 'measures'<sup>2</sup> to shift the locus of responsibility for institutional reorientation, from institutional administrators, to all members of academic communities. While clothing legitimation and reward practices in the rhetoric of quality, both the government and institutional managers increasingly have been drawn towards a greater reliance on performance appraisal.

Higher education 'quality' judgments are now framed in terms of quality *measures* to assure stakeholders that their interests are being met. In this context, it is the more easily quantifiable, readily available, performance indicators that are being seen as solutions to the need for accountability and resource allocation criteria. However, there is a risk involved in aligning quality appraisal practices with the rhetoric of performance-oriented legitimation and reward systems. The risk is that performance-based systems provide only a partial view of the dimensions of quality research. This chapter explains why the insufficiencies of performance-based appraisal systems, oriented as they are to summative evaluation of merit and worth,<sup>3</sup> are contributing to the undermining of higher education researching capabilities.

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<sup>1</sup> Higher Education Council (1992a) op. cit., p.3.

<sup>2</sup> Ibid., p.4.

<sup>3</sup> Guba, E.G. and Lincoln, Y.S. (1989) op. cit., pp.189-190.

## Quality in Diversity, and Equity in Selectivity - The Challenge for Institutions

The 1991 Baldwin policy statement<sup>4</sup> on quality and diversity in higher education indicated that the intention of the Government quality assurance approach was to balance 'institutional autonomy with public accountability' in the interests of developing higher education quality standards. This balance between autonomy and accountability was assumed to be achievable through the mechanism of self-assessment by institutions, rather than reliance on external assessments of quality. Such assessments relate 'monitoring of quality to the goals of institutions'.<sup>5</sup>

In this sense, quality moves in higher education are a direct descendent of the previous utility agenda, which used as its lever for change, funding allocations negotiated on the basis of institutional profiles. Linke, Chair of the committee investigating the use of performance indicators in higher education,<sup>6</sup> noted that with the strategic initiatives embodied in the quality agendas, the Commonwealth Government issued a challenge to institutions of higher education. This challenge was to embrace 'holistic improvement in . . . performance',<sup>7</sup> and to orient their concerns to quality improvement over the whole range of university activities. Increased emphasis on stakeholder interests provided the second, and perhaps more powerful wave of change directed towards significant cultural transformation in the practice of higher education. The 'quality' funds<sup>8</sup> from the National Priority (Reserve) Fund, allocated via a national quality audit<sup>9</sup> under the

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<sup>4</sup> Baldwin, P. (1991) *op. cit.*, p.34.

<sup>5</sup> *Ibid.*, p.34

<sup>6</sup> See Commonwealth Department of Employment, Education and Training (1991) R. Linke (Chair) *op. cit.*

<sup>7</sup> Linke, R. (1993) 'Improving Quality Assurance in Australian Higher Education: OECD Programme On Institutional Management in Higher Education, Paper presented to the IMHE Seminar, Quality Management and Quality Assurance in Higher Education. Chateau de la Muette, Paris 6th-8th December, p.1.

<sup>8</sup> Higher Education Council of the National Board of Employment, Education and Training, (1992c) *op. cit.*, pp.84-85.

<sup>9</sup> *Ibid.*, pp. 82-83.

auspices of the Higher Education Division of DEET, have been instrumental in the process of cultural change. Their power to effect cultural change at the level of the institution lies in the fact that the quality funds can have a direct influence on the institutional ‘attitude’ towards a more managerialist orientation, and market values framework.<sup>10</sup>

Between 1987 and 1994, policy development directed towards quality in higher education greatly intensified. A changing pattern in principal correlates of quality can be observed in government publications through the 1980s and early 1990s. Quality may be defined through language selected to represent quality correlates. The metamorphosis of quality correlates in successive publications reflects how the government’s perspective on quality changed over time. The publications, with their respective correlates of quality in higher education, are listed in chart 4.1. This chart provides evidence that the language used to explain, and to justify, quality appraisal changed from the initial discourse of ‘efficiency’ and ‘cost-effectiveness’ of higher education’s response to government priorities, to a discourse centred on ‘stakeholder interests’.

**Chart 4.1** *Correlates of Quality in Higher Education Research Policy, 1984 - 1992*

1984 - Linke Report <sup>11</sup>	Quality and efficiency
1987 - ASTEC Report <sup>12</sup>	Quality and value (for money)
1988 - Dawkins White Paper <sup>13</sup>	Quality and efficiency, effectiveness, accountability
1989 - (May) Dawkins <sup>14</sup>	Quality and excellence through selectivity & concentration
1989 - (July) HEC Report <sup>15</sup>	Quality and flexibility, diversity, responsiveness, efficiency

<sup>10</sup> See Marginson, S. (1994) op. cit.

<sup>11</sup> Commonwealth Tertiary Education Commission (1984) R. Linke (Chair) *Report of a Study Group on the Measurement of Quality and Efficiency in Australian Higher Education*, Evaluations and Investigations Program, AGPS, Canberra.

<sup>12</sup> Australian Science and Technology Council (ASTEC) (1987) R. Slatyer (Chair), op. cit.

<sup>13</sup> Dawkins, J. S (1988) op. cit.

<sup>14</sup> Dawkins, J. S. (1989) op. cit.

<sup>15</sup> Higher Education Council of the National Board of Employment, Education and Training (1989) *Australian Graduate Studies and Higher Degrees*, July, AGPS, Canberra.

Chart 4.1 Continued

1991 - (Oct.) Baldwin <sup>16</sup>	Quality and diversity
1992 - (Feb.) HEC <sup>17</sup>	Quality and outcomes for stakeholders
1992 - (July) HEC <sup>18</sup>	Quality and (re)assurance for stakeholders
1992 - (Oct.) HEC <sup>19</sup>	Quality and Quality Management for stakeholders <sup>20</sup>

For the purposes of the present study, the significance of these changes in quality correlates is that the language used serves to define the strategic action of Government in setting policy agendas for the essential processes of higher education practice.

In the first wave of policy-led structural change, institutions responded to the instrumental action of government with strategic action of their own. Strategic action was necessary if institutions were to comply with the conflicting requirements of economies of scale, and selectivity and concentration, in a highly competitive funding environment.<sup>21</sup> Institutions expanded greatly their student intakes, moved increasingly in the direction of the more lucrative research centres and postgraduate profiles, and directed their entrepreneurial efforts towards securing higher numbers of full-fee paying, overseas students. In many respects, the turbulence introduced by these structural changes masked underlying value conflicts between the essential processes of higher education, and the emerging legitimization and reward systems.

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16 Baldwin, P. (1991) op. cit.

17 Higher Education Council (1992a) op. cit.

18 Higher Education Council (1992b) op. cit.

19 Higher Education Council of the National Board of Employment, Education and Training (1992a) op. cit.

20 Turpin, T. & Curtis, S. (1992) *Research Training In Australia: Policy, Practice and Directions in the 1990's*, Paper prepared for the OECD Science & Technology Policy Division Workshop (Netherlands), December, Centre For Research Policy, University of Wollongong, Wollongong.

21 De Angelis, R. (1992) 'The Dawkins Revolution: Plan, performance, problems - University funding formulae, over-enrolment and cuts in operating grants per EFTSU' in *Australian Universities Review*, vol. 35, no.1, pp.38-39.

The second ‘wave’ of change, involving a pairing of ‘quality’ with ‘performance’, was indicative of the contradictions inherent in the key Dawkins policy statements of 1988<sup>22</sup> and 1989.<sup>23</sup> One reason for the confusion surrounding the pairing of quality and performance, was that researchers had to respond to policy initiatives which favoured selectivity and concentration at the same time as their host institutions were embracing mass education. Equity and selectivity represent contradictory practices, as do growth (in the number of people undertaking research) and concentration. However, all four quality ‘standards’, according to the Dawkins policies, were to be operationalised in higher education.

While each ‘standard’ has merit in its own right, inherently contradictory purposes confused the issue. The territory in which legitimation and reward were to be decided, had become one of contestation rather than affirmation of research excellence. The Dawkins policies define accountability in terms of efficiency and effective management practice. The problem was that the criteria of ‘efficiency’ and ‘effectiveness’ used in this way, were relevant to only limited aspects of higher education as a sphere of social life. As a result, the signals about what counted as *quality* research for the purposes of legitimation and reward, were confused. Because funds were so limited, this situation posed, at best a resource allocation dilemma for institutional managers, and at worst, the economic necessity of having to privilege the interests of some stakeholding groups at the expense of others.<sup>24</sup> The Government’s current platform on ‘quality’ in higher education, however, is that both accountability and resource allocation problems are to be solved by improved management practices within institutions.<sup>25, 26,27</sup> Although government funding policies have played a significant role in shaping the problems that

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<sup>22</sup> See Dawkins, J.S. (1988) op. cit.

<sup>23</sup> See Dawkins, J.S. (1989) op. cit.

<sup>24</sup> Hill, S., & Turpin, T. (1995) op. cit., p.3.

<sup>25</sup> Dawkins, J.S. (1988) op. cit., pp.93 & 103

<sup>26</sup> Dawkins, J. S. (1989) op. cit., p.2

<sup>27</sup> Baldwin, P. (1991) op. cit., p. 31.

institutions now face, they offer little assistance to institutional managers in finding solutions to such problems at the level of practice.

The Government's need to justify investment in higher education requires that quality issues be framed in the language of effectiveness and efficiency. Justifications of quality performance, in this context of quality appraisal, are to be presented in the form of summative merit and worth evaluations.<sup>28</sup> The focus for the government's evaluation activity therefore, is the efficiency and effectiveness of institutional *quality assurance* practices, and the effect of these on institutionally-determined outcomes.<sup>29</sup> Quality audits,<sup>30</sup> which serve summative evaluation purposes, are the mechanism that has been adopted by Government for appraisal purposes. These audits were carried out in the context of a national quality review<sup>31</sup> of higher education quality assurance practices. In effect, quality audits such as these are a second-order evaluation, or metaevaluation. It is a review framework designed to;

. . . cover the mission and objectives of the institution, and their relationship to the national objectives, the policies and processes developed by the institution to achieve its objectives, and the quality and quantity of its outcomes.<sup>32</sup>

There is a problem, however, with quality audits based on the notion of institutional-level quality assurance alone. Measures of efficiency and effectiveness, which characterise the necessarily summative framework for quality assurance, cannot account for, or reward, transformational, process-oriented aspects of quality. It is precisely these process-oriented, transformational aspects that assure the sustainability, flexibility and renewal of

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<sup>28</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>29</sup> Higher Education Council of the National Board of Employment, Education and Training (1992c) op cit., p.84.

<sup>30</sup> Ibid., pp.82-83.

<sup>31</sup> Ibid., pp.78-82

<sup>32</sup> Ibid.

higher education research as a sphere of social life. The transformational component of quality appraisal, given the summative assurance framework adopted for quality audits, remains an institutional responsibility.<sup>33, 34</sup> The type of quality ‘measures’ that institutions choose to adopt for judging merit and worth in the quality appraisal process are, therefore, a central issue in terms of the efficacy of legitimation and reward systems for research.

### **The Gathering Forces of the ‘Quality’ Wave**

Quality-related funds, although insignificant in terms of institutional ‘income’, wielded a disproportional level of influence over the type of ‘quality measures’ that have been adopted across the UNS. Their level of influence lay, as it did with the infrastructure mechanism, in the fact that these funds were not tied to any allocation directives. The fact that the funds were untied, afforded increased autonomy for decision-making at the level of the institution. Quality funds were to be ‘untied’ because, according to the HEC, they would be used most effectively if institutions had maximum discretion over the way they were to be awarded or spent.

In 1992, the HEC recommended that \$75 million be allocated for a national quality audit system designed to reward quality assurance practices, and that this funding be available from 1994 for a three year cycle. The maximum an institution was to receive, in each of the three respective quality ‘rounds’, was to be no more than 3% of its operating grant. The Committee for Quality Review in Higher Education was announced by Beazley, the then Minister for Higher Education on 30th. April, 1993.<sup>35</sup> The information provided

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<sup>33</sup> Higher Education Council (1992a) *op. cit.*, p.36.

<sup>34</sup> Higher Education Council of the National Board of Employment, Education and Training (1992c) *op. cit.*, p.79.

<sup>35</sup> Beazley, K. C. Minister for Employment, Education and Training (1993a) Media Release, 30 April, Canberra.



for the audit was to be in the form of self-assessments conducted by the institutions concerned. Self-assessments were to be the cornerstone of the process.<sup>36</sup> With the introduction of the 'quality rounds' to institutional calendars, the locus of reward and recognition shifted from academics in their discipline domains, to institutions in the higher education market place.

Marginson explained why it might be that the quality funds were able to exert such influence on institutional processes, and therefore effect cultural change. He explained that;

[d]irect accountability to government shapes the inner life of institutions while valorising local management, through performance-based sanctions, and forms of reporting that pattern local activity. But the key mechanism is that of "steering from a distance", whereby local management does what government wants, but does this voluntarily and on its own behalf.<sup>37</sup>

Yerbury,<sup>38</sup> Vice Chancellor of Macquarie University, acknowledged, after Round Two of the Quality Review of Higher Education, that there were benefits in the government's strategic action with regard to quality appraisal. Yerbury emphasised, however, that these benefits came at a significant cost. The benefits included a raising of the level of consciousness about quality issues, motivation for research and discussions regarding quality issues, and improvement to quality assurance mechanisms at the institutional level. Notwithstanding these benefits, Yerbury confirmed Marginson's observation regarding both the strategic response of institutions, and the negative impact on institutional processes. She observed that institutions and institutional managers had worked hard; 'in trying to guess and provide what's likely to be judged necessary by the

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<sup>36</sup> Higher Education Council, National Board of Employment, Education and Training (1992c) op. cit., p.67.

<sup>37</sup> Marginson, S. (1994) op. cit., p.34.

<sup>38</sup> Yerbury, D. (1995) 'Round Three and down for the count' *Campus Review*, 9-15 March, p. 18.

Quality Committee to get . . . a favourable result'. Furthermore, Yerbury acknowledged that, ' . . . participation in the quality rounds [had] been at a significant cost to other activities, including some which might more directly have improved our actual quality.'<sup>39</sup> This acknowledgment raised important issues regarding the nature of 'quality' judgments *per se*.

### **In the Interests of Efficacy - Matching Quality Appraisal Options to Purposes Served**

Government, because of its interests in utility and accountability, has conceptualised its role in quality appraisal as that of quality *assurance*. The HEC,<sup>40</sup> in its draft advice to the National Board of Employment, Education and Training, defined quality assurance as 'a guarantee that required standards [of efficiency and effective management practice] are being met'. 'Quality audit', the mechanism for assurance was defined as 'external scrutiny of quality management arrangements and their efficacy.' The Australian Standard AS 1057, defines quality assurance as 'planned and systematic actions necessary to provide adequate confidence that goods and services will satisfy [stakeholders'] expectations.'<sup>41</sup> The underlying processes of higher education, because they are learning-oriented and transformational in terms of service provision, knowledge enhancement and the stakeholders expectations themselves, are not reducible to an assurance-oriented approach to quality appraisal. It can be argued that a narrowly-conceived approach to quality appraisal, such as the one adopted by Government continues to be inherently inadequate for legitimation and reward of higher education practice.

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39 Ibid.

40 Higher Education Council of the National Board of Employment, Education and Training (1992b) *op. cit.*, p.51.

41 Durland, S. (1992) Illawarra Quality Improvement Network, *Illawarra Quality*, September, vol.2, no.2, p.1

The purposes served by evaluative activities, may, according to Guba and Lincoln,<sup>42</sup> be explained in one of four ways on a 2x2 matrix. The cells in the matrix represent, respectively, the nature of the judgment to be made, whether merit or worth, and the intent of the evaluation, whether formative or summative. The table consists of;

1. *Formative merit* evaluation - which assesses the *intrinsic* value of the activity or entity with a view to improving it ;
2. *Formative worth* evaluation - which assesses the *extrinsic* value of some activity or entity by judging the congruence of outcomes with expectations in a particular context of application with the intent of discovering improvement possibilities;
3. *Summative merit* evaluation - which assesses the *intrinsic* value of some activity or entity with the intent of determining whether it meets some minimal, normative or optimal standard (integrity/efficacy in relation to standard);
4. *Summative worth* evaluation - which assesses the *extrinsic* value of some activity or entity in some actual context of application.<sup>43</sup>

Quality assurance performs a system-maintaining function or institutionalises accepted practice. As an evaluative activity, it focuses primarily on summative evaluation. Summative evaluation, whether it be of merit or worth, implies standardisation and institutionalisation of the *status quo*. In summative evaluation then, 'measures' are used to confirm the value of activities for meeting the predefined expectations of stakeholders. Quality improvement, on the other hand, involves all members of the organisation in continuous improvement. In formative evaluation activity, 'measures' are used as a resource for decision-making to guide transformation, not only of the activities or processes, but also of the expectations of stakeholders. Higher education research, is, in essence, a transformational process where both understanding about the world, and understanding about effective practice for enhancing knowledge, are continually in

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<sup>42</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>43</sup> Ibid.

process. It follows then, that formative rather than summative appraisal practices are the ones that are consonant with research practice.

While outputs such as publications, citation references and the dollar value of research grants awarded are important, they are a derivative of quality practice rather than direct ‘measures’ of research quality. Using Guba and Lincoln’s evaluation matrix,<sup>44</sup> such measures would be labeled summative merit indicators. Publication and citation counts can be used to determine whether research outcomes meet minimal or optimal standards for research productivity. Such indicators are performance-based, and therefore more useful in performance-funding than are the type of appraisal processes that serve formative, improvement-oriented purposes. There is a dilemma for institutional managers which relates to the efficacy of the selected quality appraisal frameworks for research. Summative, performance-based measures are of little use in assuring the quality or sustainability of the processes involved in research practice, a dilemma compounded by the complexity of research practice across institutional settings.

The practice of research in higher education is played out in a complex matrix of varied research environments and knowledge domains. A diverse range of interests and purposes gives rise to:

- Different types of activities or ways of organising for research;
- Different discourses or ways of framing understanding; and
- Differing patterns of social relations that constitute legitimate action within particular research environments.

The criteria which define the value of action for different individuals, groups or collectives are themselves properties of the cognitive reference systems<sup>45</sup> that define the

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<sup>44</sup> Ibid.

<sup>45</sup> Habermas, J. (1987) *op. cit.*, p.136.

meaning in action. The anthropologist Geertz<sup>46</sup> highlighted the depth of the connection between knowledge-oriented social relationships, ways of organising, and the value of action, for academics.

In its very nature, being a member of a disciplinary community involves a sense of identity and personal commitment, a “way of being in the world”, a matter of taking on “a cultural frame that defines a great part of one’s life.”<sup>47</sup>

If sustainability, flexibility and responsiveness of research activity is to be assured, then the patterns of social action that sustain knowledge-oriented activity need to be the focus for quality assurance. In current quality appraisal frameworks which define legitimacy and access to rewards across the UNS, the principal standards for quality research are the quantifiable, ‘more marketable assets’<sup>48</sup> of research activity. Effective action for research, which represents the interests of researchers, is neither acknowledged nor valued.

It could be argued that unless institutions demonstrate that formative, process-oriented information is valued in terms of legitimation and reward, research appraisal systems will be insufficient for quality appraisal purposes. Furthermore, if institutions choose to focus on the more easily quantified, marketable assets of research practice, more than just researchers’ interests could be at risk. The very knowledge resources upon which institutions depend for their ‘market status’ could also be jeopardised. This thesis argues that a balance between process and product-oriented quality appraisal practices is crucial. Without this balance, potential synergies between different levels of stakeholder interests remain inaccessible to the decision-making and priority-setting activities of institutional administrative managers. The HEC addressed this problem with the encouragement it

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<sup>46</sup> Geertz, C. 1983 in Becher, T. (1989) op. cit., pp.24-25.

<sup>47</sup> Ibid.

<sup>48</sup> Becher, T. (1989) op. cit., p. 170.

offers to institutions to identify and articulate their values frameworks. The HEC proposed that;

[i]f the universities do not take the trouble to explain clearly and cogently *why* they do something, how can they show the stakeholders, internal and external, that they do it well and that it is worth doing? How can they . . . decide if it is possible to do it better . . . [or know] that it is done better as a result of the changes they introduce?<sup>49</sup>

This comment was made in the context of an exhortation to higher education stakeholders to take advantage of the opportunity afforded by the quality agendas in higher education. The HEC advised that;

[a]ll [stakeholders] have the right to contribute to the directions of the system and of individual institutions within it. And all have the obligation to make a real and meaningful commitment, in whatever way they can, to maintaining and improving the standards of the system.<sup>50</sup>

The HEC, in this statement, emphasised shared responsibility for developing quality standards. The HEC proposed that, ‘ . . . stakeholders in the system must be involved, at national and institutional levels, in developing the bases for judgments about quality in higher education.’<sup>51</sup> Reactions to quality judgments made in the Quality Review<sup>52</sup> demonstrated, however, that at the system level, lack of general agreement about the nature of policies and practices to describe or demonstrate quality in higher education was an ongoing concern.

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<sup>49</sup> Higher Education Council of the National Board of Employment, Education and Training, (1992c) op. cit., p.19.

<sup>50</sup> Higher Education Council of the National Board of Employment, Education and Training (1992b) op.cit., p.7.

<sup>51</sup> Ibid.

<sup>52</sup> Powell, S. (1994) ‘Low-ranked unis slate quality report’, *The Australian Higher Education Supplement*, 16 March, p.21.

The absence of general agreement about quality practices and standards can be attributed largely to the impact of conflicting policy imperatives being felt across the UNS. This situation has particular implications for research pursuits. An example of the conflict of purposes can be seen in the 1993 ARC draft Research Grants Committee Report on the organisation and funding of research in higher education. This report observed that;

Government has engendered an enormous capacity for quality research in Australia, but work of definite international quality, judged as worthy of funding by peer review, is not able to be funded. As a result the special capacity of the ARC to foster and support fundamental research is not effectively being sustained.<sup>53</sup>

As mentioned previously in Chapter 2, ASTEC observed that with the restructuring of the funding of higher education research, neither the direct nor the incremental costs of research were being met.<sup>54</sup> This situation, characterised as it was by infrastructure shortfalls, set the scene for quality funds to have a major impact on the ways in which institutional managers chose to approach the quality audit process. In fact, the quality audit proposal raised a great many 'quality' dilemmas for institutional managers. Institutions, as organisational entities, lacked readily available blueprints for evaluative practices with which to facilitate their new, performance-oriented, quality assurance role. 'Quality' judgments were now required in the context of discourses, practices and social relations quite different from those of the traditional academy. In the knowledge domains of traditional higher education practice, the efficacy of established systems of legitimisation and reward were guaranteed by the sedimented structures of the different knowledge domains. Within these knowledge domains, '... responsibility for quality control [was] a collective one, distributed across the whole membership.'<sup>55</sup> Host institutions were, in the context of knowledge domains, merely locational reference points within the broader

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<sup>53</sup> Research Grants Committee of the Australian Research Council (1993) P.W. Sheehan, (Chair), *op. cit.*, p.iii.

<sup>54</sup> Australian Science and Technology Council (ASTEC) (1991) *op. cit.*, p.20.

<sup>55</sup> Becher, T. (1989) *op. cit.*, p.61.

territories of fields of research. Institutions did not constitute the territory for legitimization and reward.

Piper,<sup>56</sup> from the Tertiary Education Institute at the University of Queensland, attempted to address the challenge that institutions faced in dealing with emerging demands for quality assurance, by identifying and addressing the issues in an Evaluations and Investigations Project (EIP) on *Quality Management in Universities*. His solution to the vexing problem of quality frameworks was to develop the concept of meta-evaluation. This concept had initially been proposed by both Baldwin,<sup>57</sup> and the Higher Education Council.<sup>58</sup> Quality appraisal activities were to concentrate on quality management and quality assurance practices as an institution-focused, development framework. In response to this proposed development strategy, Piper developed a comprehensive quality appraisal framework in his EIP study. However, uncertainty about quality appraisal continued to compound concerns generated by both higher education restructuring, and an absence of transparent quality standards and quality appraisal processes.<sup>59</sup> Piper himself gave voice to these concerns when he commented on the purposes which might be served by a national quality audit process.<sup>60</sup> He noted<sup>61</sup> that with the passing of the Higher Education portfolio to a new minister, there had been a distinct shift in the policy intent of the Quality Funding scheme. Piper observed that, where previously the

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<sup>56</sup> Piper, D. W. (1993a) *Quality Management in Universities: Volume 1*, Report to the Higher Education Division of the Department of Employment, Education and Training, Evaluations and Investigations Program, AGPS, Canberra.

<sup>57</sup> See Baldwin, P. (1991) op. cit.

<sup>58</sup> See Higher Education Council, National Board of Employment, Education and Training (1992c) op. cit.

<sup>59</sup> Linke, R. (1990b), *Academic Freedom, Institutional Autonomy and Accountability in Higher Education*, Report to the Minister for Education, Employment and Training, working draft.

<sup>60</sup> See Higher Education Council, National Board of Employment, Education and Training (1992c) op. cit.

<sup>61</sup> Piper, D.W. (1993b) 'Policy shift in quality funding scheme', *Australian Campus Review Weekly*, 22-28 July, p.8.



emphasis had been on quality improvement across the whole university system, the audit process had subsequently been reoriented towards supporting the emergence of a few world class institutions. Piper stated that;

[b]oth goals [improving the system and emergence of a few world class institutions] are worthy. The question is whether the quality funding system is more suited to one goal than the other. The danger is that the two goals become confused and the audit and reward system will do neither well.<sup>62</sup>

The passing of the Ministerial portfolio from Baldwin to Beazley in early 1993, however, resulted in a reinterpretation or refocusing of the purposes to be served at the level of policy implementation. The confusion of purposes in the original policy documents had simply increased the possibility of such ministerial manipulation. The gap between policy intent and policy in practice, in the case of the quality agenda was inevitable. The Government's intentions for a change in the role to be played by higher education had not waived from the original supply-side, economic rationalist framing of purposes to be served. The change in discourse, from 'utility' to 'quality' was, at base, another strategic move to support the government agenda for a higher education system that was more flexible and responsive to national needs. Efficiency and effectiveness in the form of improved management practices, has remained the 'quality' standard at the level of legitimation and reward systems. Institutional leaders and managers continue to struggle with the issues, the most pressing of which is the need for demonstrable, 'measures' of quality performance.

### **Quality - the Rhetoric and the Reality**

The principal responsibility for defining and prioritising quality assurance measures has, with the current funding arrangements for higher education research, shifted to the level of the institution.<sup>63</sup> The Australian Vice Chancellors Committee proposed that; '... in

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<sup>62</sup> Ibid.

<sup>63</sup> Grigg, L., & Sheehan, P. (1989) *Evaluating Research: The Role of Performance Indicators*, The Office of the Academic Director of Research, The University of Queensland, p.1.

the new Australia, which is evolving agonizingly but visibly from the national restructuring program, the search for quality in every field of endeavour has to be a constant preoccupation.’<sup>64</sup>

Institutions are required to determine for themselves their mission and processes and how to evaluate their achievements. Such a brief, however, requires indicators, or ‘measures’ of quality assurance processes and outcomes, that will articulate smoothly with legitimation and reward criteria which are relevant and useful at the level of the system. Furthermore, information that could serve as a resource for such ‘measures’ cannot be generated without effective information gathering and reporting systems. It is this tension which has led institutional managers to strike a Faustian-type bargain<sup>65</sup> with the ‘guardians of accountability’.<sup>66</sup> Faust’s selling of his soul in return for power and knowledge is analogous to the behaviour of present day institutional administrators. In the current climate of fiscal constraint, institutional administrators are tempted to ‘sell out’ their obligations to academic stakeholders in return for enhanced standing in the higher education marketplace. This higher standing is accomplished by valuing only those ‘measures’ of quality having currency in the competitive funding system. With a pressing need for accountability ‘measures’, the more easily quantifiable performance indicators provide one way of limiting the administrative demands of accountability requirements. Quantifiable, performance-based indicators are an attractive option when assurances regarding the normative characteristics of everyday practice and desired outcomes are required. Godfrey, when Second Commissioner of Taxation, commented, ‘. . . we tend to report on and manage indicators which are easy to measure but superficial rather than those which are truly fundamental, but much more difficult to measure.’<sup>67</sup> The problem with such indicators is that they ‘measure’ only that which can

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<sup>64</sup> Australian Vice Chancellors’ Committee (1992b) op. cit., p.4.

<sup>65</sup> Macquarie Dictionary, Second Edition (1991) Macquarie Library, Macquarie University, New South Wales, Australia.

<sup>66</sup> Godfrey, B. (1993) ‘The Learning Organisation and Accountability in the Public Sector’, *Canberra Bulletin of Public Administration*, September, no.73, p.44.

<sup>67</sup> Ibid.

be calibrated, and there are currently no calibrated ‘measures’ for the important process-dimensions of research practice.

Institutions have been placed, therefore, in a difficult position with regard to their role in supporting research pursuits in that it is the institutional administrative managers who are the mediators of Government and economic imperatives. Institutional administrative managers are forced to make decisions in favour of those practices which will ensure the survival of the institution, in those circumstances when the expectations and goals of government and academic communities differ. Despite the rhetoric of quality appraisal at the level of the system, the quality ‘rounds’ have inevitably been perceived, by institutions, as a process of picking winners.<sup>68</sup> In the decade of quality, the stakes for funding have been raised, and the level of the competition elevated to that between institutions. The competition is no longer simply between academics competing for research funds. Marginson observed;

[c]ompetitive mechanisms for allocating funds for special programs or research force institutions to tailor bids to the criteria. Academics and institutional managers have the “choice” of not complying with the requirements, but they will lose money . . . This forces conformity with the whole range of government policies, while normalising the operation of a nationwide competitive market.<sup>69</sup>

The diversity and complexity of research activity, in this context, could prove to be a liability for institutional administrative managers. Furthermore, the physical and cognitive infrastructures which sustain such diversity could be seen as a luxury, no longer justifiable in the context of ‘utility’ agendas. The dilemma for institutional managers is that their institutional profiles are built, in large part, on the skills and capabilities of their researchers. In order to sustain a high research profile, therefore, it

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<sup>68</sup> Research Grants Committee of the Australian Research Council (1993) P.W. Sheehan (Chair), *op. cit.*, p.4.

<sup>69</sup> Marginson, S. (1994) *op. cit.*, p.35.

will be necessary for institutional managers to provide for the physical and cognitive infrastructures that are integral to the processes of effective knowledge production.<sup>70</sup>

In mediating the system's demands for institutional performance, institutional administrative managers have an obligation to ensure that there is mutual shaping of quality standards. In order to maintain or enhance research profiles, managers will need to facilitate the mutual shaping of the interests and expectations of academic stakeholders, and the interests and expectations of government stakeholders. If strategies for achieving this mutual shaping are not developed, then institutions risk undermining their capacity to meet their obligations, both to the government as the funding agency, and to the researchers who make institutional flexibility and responsiveness possible.

### **What Counts is What can be Counted**

It is apparent, however, that 'when questions of quality arise, indicators that can be counted, abstracted or generalised, exert a seductive influence over what is seen to be important in the context of system's accountability.'<sup>71</sup> The purposes to be served by quality judgments are complex and problematic, and institutions have responded to the system's demands for quantitative indicators without contesting their efficacy for institutional quality standards. This situation can be compounded by the use of management information systems which can be biased to easily quantifiable performance data, and oriented to the information needs of institutional administration and resource allocation. Existing quantitative appraisal practices which are easily transformed into electronic text, provide an attractive development option for administrative managers. This is certainly the case when collection of quantitative, aggregated data, is compared with the more difficult task of mapping, and making explicit the underlying transactional and communicative processes that support human action systems.<sup>72</sup>

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<sup>70</sup> Becher, T. (1989) op. cit., p.1.

<sup>71</sup> Curtis, S. (1993b) 'Quality Appraisal for Higher Education in the 1990s', *Evaluation Journal of Australasia*, vol.5, no.2, p.38.

<sup>72</sup> Zuboff, S. (1988) *In The Age of The Smart Machine: The Future of Work and Power*, Heinemann

It is not so much the quantitative indicators themselves that are the problem but rather the uses to which such 'measures' are put. Performance information may be used to enhance managerial and bureaucratic control or it may be used to facilitate the development of collective responsibility and joint ownership of action. This thesis argues that collaboratively generated quality standards can obviate the need for instrumental or strategic action on the part of institutional managers.<sup>73</sup> It is precisely this type of information which is not easily reducible to electronic text or amenable to managerialist 'control'. However, these are issues which lie beyond the horizons of the government's current theory of action for quality appraisal of research. These limited horizons are evident in a statement by Baldwin, the then Minister for Higher education and Employment Services.

Strategic management at the institutional level necessarily involves the establishment of management information systems for resource control and performance monitoring. Such systems are essential to accountability which is the other side of the autonomy coin.<sup>74</sup>

There are no simple solutions when it comes to quality appraisal, regardless of the administrative benefits offered by quantitative options. The Report on Performance Indicators in Higher Education (the Linke Report), observed that;

[i]t is apparent from the analysis of individual indicators that we may specify certain quantifiable measures of efficiency and effectiveness of performance and that these may provide useful profiles of institutional activity. However in no area of academic performance is it possible to generate systematic data which would adequately serve as the sole source of information leading to an acceptable evaluation of quality.<sup>75</sup>

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Professional, Oxford, p.10.

<sup>73</sup> Zuboff, S. (1988) *ibid.*, p. 7.

<sup>74</sup> Baldwin, P. (1991) *op. cit.*, p.31.

<sup>75</sup> Commonwealth Department of Employment, Education and Training (1991) R. D. Linke (Chair)

The insufficiency of performance indicators presents institutional managers with a legitimization problem of their own, particularly with the current system-level performance appraisal trajectory. Recognition of merit within knowledge domains is insufficient for legitimization purposes in a competitive research environment oriented towards government priorities. If an institution engages in the process of ‘picking winners’ within a ‘utility’ focused legitimization and reward framework, the selectivity processes could redirect research pursuits towards the more short term, output-oriented research questions. Furthermore, if institutions focus on supporting only those researchers who have excelled in ‘grantsmanship’, this action may serve to reinforce patterns of academic privilege and sedimentation in academic communities, thus mitigating against innovation and responsiveness.<sup>76</sup> Alternatively, if selectivity decisions are steered primarily by congruence between government priorities and the preferred institutional research strength profile, new patterns of privilege may emerge having more to do with the funding priorities of government, than with sustainability of scholarship and research excellence. The strategic choices institutions make will impact necessarily on the quality of research environments and, as a result, on the creative and innovative capabilities which underpin institutional standing. Hill and Turpin note that it is not only at the level of institutional priorities, however, that changes in legitimization and reward practices have had an impact. They cite a universal trend towards changing expectations for higher education and claim that, ‘[u]niversities globally are confronting an identity crisis’.<sup>77</sup>

Academics may be insulated to a certain extent from the distortion of strategically motivated legitimization and reward systems, if they have obtained their doctoral degrees

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op. cit., p.xiii.

<sup>76</sup> Becher, T. (1989) op. cit., p.58.

<sup>77</sup> Hill, S., & Turpin, T. (1992) op. cit., p.4.

from, or work in high status institutions or academic departments.<sup>78</sup> Becher<sup>79</sup> observed that those people with a position of privilege in academic networks are less likely to experience the crises that flow from a bias towards performance-based indicators. In such instances, the sedimented peer review structures tend to protect and to sustain the identity of the academic. For new researchers, however, a bias towards performance-based indicators in the pursuit of institutional profiles, may prove to be an effective gatekeeping mechanism that locks out potentially innovative and high quality research. In the context of performance-based quality appraisal, the valorisation of research excellence by institutional managers is an inherently risky business. By uncoupling the symbols of academic merit from academic processes and expropriating these for institutional prestige purposes, institutional administrative managers have chosen to privilege market values over the academic values of knowledge domains. The real risk is that neither set of values is well served. A bias towards one necessarily undermines the effective functioning of the other.

### **Performance-Oriented Quality Appraisal - The Power of the Quantitative Option**

Institutional administrative managers, in pursuit of financial security for their organisations, have chosen performance-based appraisal options because it is these options that provide for smooth articulation with the government's accountability requirements. Performance appraisal has been an issue for the Australian Government since the early seventies.<sup>80</sup> This concern was most clearly demonstrated on the commissioning of work on performance indicators. These included; Evaluating

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<sup>78</sup> Becher, T. (1989) op. cit., p.55.

<sup>79</sup> Ibid.

<sup>80</sup> Linke, R. (1990a) in Kells, H.R. (ed) Organisation For Economic Co-operation and Development's Program on Institutional Management in Higher Education Report on *The Development of Performance Indicators in Higher Education: A Compendium for Eleven Countries*, Paris, June, p.9.

Research: The role of Performance Indicators,<sup>81</sup> An Evaluation of A Model for Allocating Funds Across Departments Within a University Using Selected Performance Indicators,<sup>82</sup> the Research Performance Indicators Study,<sup>83</sup> the National Board of Employment, Education and Training Commissioned Report on Quantitative Indicators in Australian Academic Research,<sup>84</sup> the continuing Performance Indicators Project work of Bourke and Butler<sup>85</sup> and the recently funded study on citations and citation impact.<sup>86</sup> The development of performance indicators provided, in effect, the sub-text to the government's quality agendas which focused on institutional accountability and efficiency.

Higher education institutions are non-profit, government funded organisations in which the commercial yardstick of profit and loss is inapplicable, so performance indicators provide a medium for performance appraisal.<sup>87</sup> The period of consolidation and the 'settling in process'<sup>88</sup> that followed the establishment of the UNS was marked by a period of focused research and development of performance measures. Murphy noted,

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<sup>81</sup> See Grigg, L. & Sheehan, P. (1989) op. cit.

<sup>82</sup> Hattie, J., Tognolini, J., Adams, K. & Curtis, P. (1991) Department of Employment, Education and Training, *An Evaluation of a Model For Allocating Funds Across Departments Within a University Using Selected Indicators of Performance*, Evaluations and Investigations Program, AGPS, Canberra.

<sup>83</sup> National Board of Employment, Education and Training (1993a) *Research Performance Indicators Survey: Commissioned Report No. 21*, (PEG Study), AGPS, Canberra.

<sup>84</sup> Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) op. cit , AGPS, Canberra.

<sup>85</sup> Bourke, P. & Butler, L. (1993) Occasional Paper No.1. *Mapping Scientific Research in Universities: Departments and Fields*, Performance Indicators Project, Research School of Social Sciences, The Australian National University, Canberra.

<sup>86</sup> Murphy, P. (1995b) *The Quality and Impact of Research Publications*, A Study funded by the National Board of Employment, Education and Training from the Grants for Innovative Projects Program. Draft Report, 20 November, Faculty of Education, University of Wollongong, Wollongong.

<sup>87</sup> Clark, B. R. & Neave, G. R. (1992) 'Performance Indicators' in *The Encyclopedia of Higher Education, Vol. 2: Analytical Perspectives*, Pergamon Press, Oxford, p.1411

<sup>88</sup> Baldwin, P. (1991) op. cit., p.1.



that from an historical perspective, Dawkins had, ‘. . . signalled [the Government’s] intentions to fund universities on the basis of performance indicators.’<sup>89</sup>

While quality and diversity provided the territory for the broader policy debate in the Dawkins and post-Dawkins eras, the fine focus of discussion centred on the type of ‘measures’ that could be employed in matters of selectivity and concentration. These measures were conceptualised in terms of performance indicators, and were intended to shed light on the functional capacity and capabilities of the restructured institutions. Dawkins noted that, ‘As soon as practicable, indicators which are agreed to be useful and appropriate will be incorporated into the Commonwealth’s general funding arrangements for higher education.’<sup>90</sup>

Kells,<sup>91</sup> from the Centre for Higher Education Management in the United Kingdom, pointed to the fact that the terminology of ‘performance indicators’, when used in quality appraisal, can be problematic because the purposes served change with different contexts of use. For example, performance indicators have been used in the United States both to inform peer review and for internal management and formative evaluation purposes. Alternatively, performance indicators may be used to evaluate the congruence between university outputs and government goals. In pursuance of this function, results may be published in league tables that influence funding decisions. The latter is more representative of their use in Finland, France, the Netherlands and the United Kingdom.<sup>92</sup> However, recent legislative moves in the United States have changed the nature of federal government’s involvement in institutional accreditation and quality assurance. These changes have led to a new focus on the development of a national system of ‘indicators’.<sup>93</sup>

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<sup>89</sup> Murphy, P. (1994) *op. cit.*, p.4.

<sup>90</sup> Dawkins, J.S. (1988) *op. cit.*, p.86.

<sup>91</sup> Kells, H. R. quoted in Clark, B. R. & Neave, G. R. (1992) *op. cit.*, pp.1418-1419.

<sup>92</sup> *Ibid.*

<sup>93</sup> Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) *op. cit.*, p.xviii.

Kells, in his paper for the Journal of *Higher Education Management*, advised that it was vital to consider the context of use when discussing performance indicators because of the semantic, technical, political and organisational factors which compound their definition and purpose. He presented a table which listed factors observed to have an influence on the level of interest in and support for performance indicators. This table demonstrated, for example, that as resources diminish there is an increasing interest in performance indicators. When the extent of the government's trust in higher education diminishes the interest in performance indicators rises. Similarly, if the government has a strong interest in efficiency, effectiveness and the competitiveness of institutions and is committed to government steering of higher education, the interest in developing performance indicators will be high. Such an interest would further be enhanced should the government of the day believe that differences do and should exist between institutions in access, content, and quality. The condition that is linked to an acceptance of institutional differences, is the interest of institutions themselves in nationally compiled, comparative performance indicators.<sup>94</sup> This interest, on the part of both the Australian Government and the institutions, is evident in the development of the Core Australian Specification for Management and Administrative Computing system (CASMAC).

Each of the pre-conditions mentioned above is present in the Australian context at the level of practice. In terms of theory of action, or the theory represented in Government rhetoric, institutional autonomy is seen as very important, and the focus is on performance indicators specific to the institution's identified mission and goals. In the 'gap' between the government's theory of action and theory-in-use, the antithesis of the government's stated position is emerging from the guiding thesis of institutional autonomy. In a highly competitive funding environment, with an ever-increasing demand for public funds, there is increasing pressure for 'a credible and objective basis for distributing research funds selectively'.<sup>95</sup>

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<sup>94</sup> Kells, H. R. (1992) 'An Analysis of The Nature and Recent Development of Performance Indicators in Higher Education', *Higher Education Management*, vol.4, no.2, July, p.137.

<sup>95</sup> Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) op. cit., p.8.

The growing concern of the government for reliable performance appraisal measures was expressly signalled by the commissioning of the Performance Indicators in Higher Education, Trial Evaluation study.<sup>96</sup> This study provided a set of performance measures based on results-oriented criteria. At the level of practice, the measures were primarily those of summative evaluation for system accountability, rather than formative evaluation for within-institution, quality improvement purposes. Process indicators that could provide the basis for quality improvement within the system of higher education did not figure in recommendations from these investigations with the result that the 'invisible product' of higher education research remained just that - invisible. The outcomes of the Performance Indicators study revealed that when there is a over-reliance on aggregate level, output-oriented performance indicators, the deeper concerns which relate to the quality of research environments, remain unexamined.

The OECD Institutional Management in Higher Education Performance Indicators Workshop,<sup>97</sup> noted that performance indicators can be differentiated into three categories according to the purposes served. These categories relate to particular levels of expectations and interests with regard to the purposes served by higher education. In the first of these categories, performance indicators serve as a mechanism for monitoring institutional responses to government goals and policies. In the second category, performance indicators are focused on teaching, learning, research and community service. In the third category, performance indicators provide the information that is required for university management activities.

In the current climate of economic stringency, it is the first and third categories of summative-type indicators that are privileged. The problem of too narrow a focus on summative, performance-oriented information is perpetuated by a continuing reliance, on

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<sup>96</sup> See Commonwealth Department of Employment, Education and Training (1991) R. D. Linke (Chair) *op. cit.*

<sup>97</sup> Kells, H. R. (1992) *op. cit.*, p.133.

the part of academics themselves, on performance appraisal measures. The Performance Indicators ranked by Australian academics in the national, *Research Performance Indicators Study*,<sup>98</sup> indicated that for them as stakeholders, the four highest desirable indicators in each of the respective disciplines surveyed included:

- Articles in refereed journals;
- Commercially published peer review books;
- Major refereed conference presentations;
- Papers in refereed conference proceedings;
- Articles weighted by journal citation impact;
- Chapters in commercially published peer reviewed books; and
- Competitive, peer reviewed grants.<sup>99</sup>

This same report concluded, that regardless of which group was surveyed about general research productivity indicators, there was a strong possibility that consensus on a set of standard measures was possible. However, a follow-up study advised that great caution was required and that there was a need for different ‘baskets’ of indicators to serve different purposes.<sup>100</sup> Furthermore, the proposition that consensus was possible was untenable because;

. . . for many fields [of research] there is simply too much variation across respondents in rankings for the consequent listings to be of definitive use [as the basis of quality standards].<sup>101</sup>

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98 National Board of Employment, Education and Training (1993a) op. cit., p.viii.

99 Ibid.

100 Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) op. cit., pp. xix-xx.

101 Ibid., p.29.

This second, more critically reflective report does hold out some hope that contestation on the part of academics concerning appraisal measures may still be present, albeit in a relatively undefined and diffuse form.

### **Strategic Action and Technical Control - Give a Person a Hammer . . .**

Linke, one of Australia's principal policy researchers in the nature and use of performance indicators, highlighted the trap into which governments and institutions can fall with an over-reliance on abstract indicators of performance appraisal. Linke<sup>102</sup> was highly critical of the theory of action behind the government's redirection of funds from the research quantum of recurrent grants to competitive research funding. He proposed that the redistribution mechanism for infrastructure funding was wrong in two respects. Firstly, the 'measures' or performance indicators were to include external grant income. This measure, proposed Linke, has no direct relationship to staff research performance. What it did reflect was a supplementary project cost, rather than the time commitment of regular academic staff, which was strongly influenced by differential research costs. In a similar vein, Linke noted that the number of higher degree research students was a reflection, not of research productivity, but of training processes. Secondly, performance measures took no account of the institutional context and its discipline profile. In light of these shortcomings, he suggested that;

[w]hile this proposal for redistributing research related funding [was] justified by the Commonwealth as a strategy for improving institutional performance - more specifically the cost effectiveness of their general research effort - its ultimate impact [was] likely to undermine the very process it purports to enhance.<sup>103</sup>

Linke believed that the use of the dollar value of research grants as the criteria for infrastructure funding, violated all basic principles recommended for the rational use of

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<sup>102</sup> Linke, R. (1993) op. cit, p.9

<sup>103</sup> Ibid.

performance indicators. These principles included the selection of appropriate measures, the making of provisions for expert judgment, (and taking into account the institutional context), provision of both incentives and opportunities for improvement. It could be argued that these same criticisms retain their currency with any performance appraisal options employed as a framework for legitimization and reward of research.

The burgeoning interest in citation indices as a legitimate ‘measure’ of quality research, reflects perhaps the coming ‘third wave’ of change in legitimization and reward of higher education research. Murphy<sup>104</sup> noted that the emphasis in both Britain and Australia, in the use of quantitative performance indicators, ‘seems to be less upon evaluating the quality of research *per se*, than upon developing rationales for funding decisions.’<sup>105</sup> The apparent ‘truth’ value of quantitative citation measures, offers a tempting resolution to the government’s research funding allocation dilemmas inherent in the policy contradictions discussed previously. Citation measures are a representation of the level of impact of an individual’s research publications.<sup>106</sup> The ‘measure’ of *impact* is the number of times the individual’s publication is cited in subsequent publications during a given period. However, Bourke and Butler,<sup>107</sup> noted that the level of aggregation at which bibliometric information may appropriately be used, is subject to contestation. They pointed out that;

[i]n general, counts of citations require a large number of observations over reasonable periods of time to overcome various distortions; at the same time, these counts are of limited interest or are inadmissible in considering the work of individual persons.<sup>108</sup>

The level of technical control that citation counts afford decision-makers, however, means that this type of quality ‘measure’ can provide a new and apparently legitimate

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<sup>104</sup> Murphy, P. (1994) op. cit., p.17.

<sup>105</sup> Ibid.

<sup>106</sup> Hattie, J., Tognolini, J., Adams, K., & Curtis, P. (1991) op. cit., p.11.

<sup>107</sup> Bourke, P. & Butler, L. (1993) op. cit., p.2

<sup>108</sup> Ibid.

mechanism for quality appraisal and resource allocation. If utilised for funding decisions, it would be a mechanism that could strengthen significantly the established links between competitive funding and infrastructure arrangements, forged during the first wave of changes in the Dawkins era. The intention of government to strengthen its interests with such mechanisms has been signaled by the ARC's funding of a study for *Determining Measures of the Quality and Impact of Research Publications*.<sup>109</sup> The real danger is that because citation indices are relatively easy to access, the information that is contained in them arbitrarily defines both the criteria and the boundaries of decision-making. It is not only quantitative, performance-based information that is privileged in these circumstances. Simplified, often unrepresentative output measures are similarly privileged, because research outcomes cannot be accounted for in their true complexity and diversity.<sup>110</sup> Bourke and Butler<sup>111</sup> suggested that;

... any evaluative indicators at the level of AOU [academic organisational units] only, such as university departments, will obscure important features of modern research, especially in the sciences . . .

These researchers further advised that the use of citation patterns as evaluative indicators should be complemented by scrutiny of the 'intellectual structure and field orientations of the unit under study.'<sup>112</sup>

Print, Head of the Curriculum Research and Development Centre in Sydney University's education Department, and Hattie,<sup>113</sup> an education Professor from the University of North Carolina, have also noted that caution is required when using citation counts. They warn that because these type of data may easily be aggregated to produce a measure

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<sup>109</sup> Murphy, P. (1995b) op. cit.

<sup>110</sup> Garfield, E. (1988) 'The impact of citation counts', *Current Contents*, 20, pp.3-5.

<sup>111</sup> Bourke, P. & Butler, L. (1993) op. cit., pp.3 & 11-12.

<sup>112</sup> Ibid.

<sup>113</sup> Print, M. & Hattie, J. (1995) 'Citation approach to determining quality must be used with caution', *The Australian*, Higher Education Supplement, 5 April, p.30.

of research quality, such ‘measures’ can be readily integrated into policy-level decision-making, especially those decisions related to financial policy. These authors report on the significant shortcomings of citation index data for decisions regarding quality research. They caution that those with a stake in higher education research should be wary of any attempts to ‘rely excessively on them as a measure of research quality’.<sup>114</sup>

It could be argued that there is a risk that citation indices could serve to strengthen significantly, the instrumental action of government. However, academic stakeholders do, within the current policy context, have a mandate from government to participate in establishing criteria for quality appraisal in the form of institutional goal statements. The present study seeks to capitalise on this opportunity by working collaboratively with those directly involved in research processes, to develop an alternative process-oriented, formative, quality appraisal framework.

The HEC indicated the importance of formative, process-oriented information by itemising general concerns that underpin the research function. These include; how the university manages its research environment and encourages creativity, how it manages staff time, postgraduate students and their supervision, the infrastructure, and the way in which the ethos of questioning and interpreting existing knowledge, and its creation, influences the university’s culture.’<sup>115</sup> Without the option of a process-oriented, formative, quality appraisal practices, however, there is little or no chance that researchers will be able to gain a clear understanding of the nature and level of constraint which performance-based appraisal frameworks impose on research practice. Furthermore, without this type of information, it is unlikely that formative quality improvement data will figure in institutional priority-setting and decision-making. Institutions have been given the opportunity to value this type of information in the

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<sup>114</sup> Ibid.

<sup>115</sup> Higher Education Council, National Board of Employment, Education and Training (1992c) *op. cit.*, p.79.



process of developing institutional profiles and in demonstrating improvements in performance relative to their starting point, goals and quality objectives. Institutional administrative managers, though, face a difficult task if they are to take the opportunity presented to them, to meet their obligations to research as a sphere of social life. The difficulty arises because the government's 'utility-oriented' theory of action at the system level tends to replace, rather than condense, symbols of academic excellence. In pursuance of demonstrable quality performance, traditional legitimation and reward systems for academic excellence, such as research publications and research funding, have been subsumed by Government and institutional administrative managers as abstract indicators for performance-based funding.

In the Commonwealth Competitive Granting scheme the rhetoric of policy statements is that '... competitive research funding, [has been designed] to ensure that resources are directed to the best researchers, teams and institutions . . . , with allocations determined through stringent peer review'.<sup>116</sup> At the level of practice, however, the legitimation and reward of 'best' researchers can be distorted because, with greatly increased demand in an era of economic stringency, 'access' is necessarily very limited. With the pressure on institutions to attract research infrastructure in the greatly expanded higher education system, the unintended outcome of performance-based funding is that peer reviewers have become defacto 'gatekeepers' of research funds.<sup>117</sup> In the academy, one of the key purposes of peer review has been to recognise and to reward academic excellence. While 'excellence' in terms of scientific merit is still the focus for selection processes, excessive demand has meant that 'many excellent projects . . . miss out on funding . . .'.<sup>118</sup> The record low figure in 1994 for the success rate in grant applications was testament to the

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<sup>116</sup> Baldwin, P. (1991) op. cit., p.5.

<sup>117</sup> Illing, D. (1995) 'Peer Review under the spotlight', *The Australian Higher Education Supplement*, 15 November, p.26.

<sup>118</sup> Sheehan, P. (1993) quoted in *Science Technology*, vol.13, no.10, October, Scitech Publications, Canberra, p.1.

morale-sapping situation described by Aitkin,<sup>119</sup> where legitimization purposes have been confused with resource allocation purposes.

### **A Surfeit of Stakeholders and a Confusion of Purposes**

The difficulty for institutional managers is that diversity, of itself, creates tensions for priority setting because of the wide range of norms, strategies and assumptions that need to be accommodated. While the Australian Vice Chancellors Committee proposed that, 'Diversity is an appropriate strategic response to the reality of an unknowable future',<sup>120</sup> the strains and tensions present in the system point to the possibility that, with the current bias towards meeting the system's economic and political imperatives, reduced diversity at the institutional level may be the price of survival. This situation is further compounded by the diversity of research activities and concomitant variation in quality standards, making quality appraisal highly problematic. The criteria by which research 'quality', research 'strength' and 'research excellence' may be judged are as varied as the fields of research. Professor Gayle, Vice Chancellor of the University of Western Australia proposed that;

[q]uality is about difference. Each institution needs to have its own different measures . . . The quality controls for a system that is largely research-based must be very different from those required for a system that is largely skills-based.<sup>121</sup>

The problem for academic communities, however, is that there is no general agreement on the manner in which quality standards might be defined or implemented. Research communities face a significant challenge in developing appropriate quality appraisal systems to accommodate the existing complexity and diversity. Baldwin citing the

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<sup>119</sup> Aitkin, D. (1990) op. cit., p.13.

<sup>120</sup> Australian Vice Chancellors' Committee (1992b) op. cit., p.7.

<sup>121</sup> Gayle, F. (1991) 'True Quality entails *viva la difference*', *The Australian Higher Education Supplement*, 4 September, p.14.

HEC's observation noted that;

[n]o two institutions share naturally all the ground relating to their course and student mix, faculty composition, international concerns, links with industry and responses to labour market pressure; nor should they share, by definition, an identical philosophical approach to education simply because they share the title "university".<sup>122</sup>

The implications of this diversity for higher education advised Baldwin, are that;

[t]he way . . . responsibilities are met relates to the autonomy of institutions and has led to some of the existing, but divergent, qualities in Australian higher education; it is important that they be preserved, sustained and enhanced.<sup>123</sup>

The Commonwealth Government concedes that 'the main rationale for institutional restructuring . . . was to enhance quality through enrichment of academic programs'.<sup>124</sup> However, the problems that have emerged in relation to judgments of merit and worth,<sup>125</sup> and decisions concerning quality in higher education, seem only marginally closer to resolution than they were at the outset of quality debates. This situation was foreshadowed in 1991, in the comments of the Committee investigating Performance Indicators in Higher education.

Interest in evaluating the quality and efficiency of the education system has grown faster than the capacity to do evaluation. There is a considerable range of objectives, a certain amount of conflict between objectives, and differences between individuals and groups in the community.<sup>126</sup>

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<sup>122</sup> Higher Education Council 'The Challenges Ahead' in Baldwin, P. (1991) op. cit., p. 39.

<sup>123</sup> Ibid.

<sup>124</sup> Baldwin, P. (1991) op. cit., p.3.

<sup>125</sup> Guba, E.G. & Lincoln, Y.S. (1981) op. cit., Ch.3.

<sup>126</sup> Commonwealth Department of Employment, Education and Training (1991) R. D. Linke (Chair), op. cit, p.1

While this confusion, ambiguity and uncertainty continues, the problem of resource allocation and infrastructure support for research will remain unresolved. In this context, the researching capabilities of the higher education research communities must inevitably be undermined through the constraint of academic research programs. This outcome is precisely the reverse of what Government intends with the implementation of the key policy documents currently steering the higher education research enterprise.

In Dutch higher education, De Weert and Weusthof<sup>127</sup> have attempted to deal with the different levels of focus required for quality appraisal by developing a three-level model for assessing operations and processes. Maassen and van Vught,<sup>128</sup> in commenting on this model, describe the way in which it distinguishes the societal, the institutional, and the individual levels of stakeholder interests. Each level of focus has its own expectations or goals which provide the framework and the standards for quality appraisal. The goals and interests of stakeholders differ and, 'it is not possible to define quality in such a way that it is acceptable to all three levels [of stakeholders] at the same time.'<sup>129</sup> Research activity occurs in an environment where the meaningfulness and value of activity is judged by its contribution to enhancing or extending understanding of experience. In this sense, research activity is bound just as much by conceptual frameworks as it is by social action. The processes which facilitate enhanced 'understanding' provide the essential dynamics of research activity and the 'coming into being of meaning'.<sup>130</sup> This level of focus, and this type of information, cannot be represented adequately in quantitative, output-oriented, performance-based indicators

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<sup>127</sup> de Weert, E. & Weusthof, P. J. M. in Maassen, P. A. M. and van Vught, F. A., (1988) *An Intriguing Janus-Head: The two faces of the new governmental strategy towards higher education in the Netherlands*, Higher Education Policy Studies, Publication no. 58, January, Centre For Higher Education Policy Studies, University of Twente, Enschede, p.16.

<sup>128</sup> Maassen, P. A. M. and van Vught, F. A., (1988) *ibid.*, p.16.

<sup>129</sup> *Ibid.*

<sup>130</sup> Gadamer, H. G. quoted in Bernstein, R. (1993) *Beyond Objectivism and Relativism, Science Heremutics and Praxis*, Basil Blackwell, England, p.131.

because the interests and the level of focus relate to the effectiveness of action systems for research processes. It is at this level of focus, that metalearning, or tacit knowledge-in-use, is most relevant to quality standards for research practice.

As Maassen and van Vught<sup>131</sup> have indicated, there are enormous difficulties in specifying credible performance indicators. Murphy, Hill, Linke and Aylward,<sup>132</sup> propose that the purposes to which such measures may be put, is an area that should be open to contestation. The expectations and goals at different levels of the system may attach different meanings to indicators, depending on their particular interests. The institution's role in mediating different levels of expectations is, therefore, crucial to the efficacy of selected indicators. A further important consideration, however, is that meanings may change as resources diminish and demand escalates. This situation requires careful monitoring of the efficacy of value judgments, given that such judgments are internally related to stakeholder's expectations of a particular sphere of social life at a given point in time.

Publications, as research quality indicators, serve the expectations and aspirations of the knowledge domains of higher education as the means by which academics secure access to academic status and intellectual capital. However, the same indicators may prove of limited worth in the competition for scarce research dollars in an environment of utility-oriented agendas and economic stringency. In this case, the indicators could quite easily be used as mechanisms for 'gatekeeping' research funds with arbitrary limits set, not by excellence, but by the level of funds available, and government and institutional priority setting. In a situation such as this, academic status and intellectual capital could be adversely affected, because 'excellence' without funding, is of limited use to the institution's survival interests. Given Becher's observation that, '... the main currency for the academic is not power, as it is for the politician, or wealth, as it is for the

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<sup>131</sup> Maassen, P. A. M. and van Vught, F. A., (1988) op. cit., p.16.

<sup>132</sup> Murphy, P., Hill, S. Linke, R. & Aylward, D. (1994) op. cit., pp. xix-xx.

businessman, but reputation',<sup>133</sup> the interests of academics and institutions could, in such circumstances, diverge.

The absence of possibilities for mutual shaping of quality standards is a serious issue for all higher education stakeholders, given the strategic action of government embodied in policies currently steering higher education research and quality appraisal practice. If the government's strategies and funding mechanisms are, as Linke suggested, undermining the very goals it seeks to achieve, then some medium for generating and facilitating a dialogue about appropriate frameworks and standards for quality judgments is warranted. Yorke,<sup>134</sup> in his presentation to the Society for Research in Higher Education Conference at the University of Sussex, reflected on the accountability and quality enhancement relationships between higher education and government. He suggested that government, through its agencies, needed to engage higher education institutions in productive discussion about aims, objectives and desired outcomes. Further, York proposed that what was required in the current circumstances was a 'shared understanding of what the system is expected to achieve, and the criteria against which achievements may be assessed.'<sup>135</sup> Because performance indicators primarily serve quality assurance purposes, they are inadequate and insufficient as an information resource for this dialogue.<sup>136</sup>

In this and previous chapters, the insufficiency of current legitimization and reward systems for higher education research has been thematised as:

1. An absence of important components of research practice from legitimization and reward systems for higher education research;

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<sup>133</sup> Becher, T. (1989) *op. cit.*, p.53.

<sup>134</sup> Yorke, M. (1993) 'Siamese Twins? Performance Indicators in the Service of Accountability and Enhancement'. Keynote address to the Annual Conference of the Society for Research in Higher Education, University of Sussex, 14-16 December.

<sup>135</sup> *Ibid.*

<sup>136</sup> Godfrey, B. (1993) *op. cit.*, p.41.

2. The valorisation of research excellence by competitive funding systems in which performance appraisal translates symbols of academic excellence into symbols of 'market' success;
3. An uncoupling of legitimation and reward systems from the academic cognitive reference systems which sustain social relations of knowledge;
4. The failure of both institutional managers and academics to meet their obligations to research as a sphere of social life by contesting the efficacy of legitimation and reward systems that undermine research practice; and
5. The absence of a quality appraisal framework, that condenses rather than replaces the symbols of effective action for research practice, required for improving the rationality, justice and transparency of legitimation and reward systems for higher education research.

The present study argues that the discourse of quality appraisal in higher education research requires a balance and that this balance may be provided by process-oriented, formative evaluation practices. If the insufficiencies in current quality appraisal practices for higher education research are to be addressed, then institutional legitimation and reward systems will need to include formative evaluation activities that facilitate contestation of what is valued in research practice. A framework for formative, quality improvement evaluation practices would necessarily include:

- Appropriate discourses for describing and justifying effective research;
- Substantive information about the activities and practices which define effective action for research; and
- Mechanisms for identifying and supporting the type of social relations which sustain and continually renew research in higher education.

The need for such a framework, and indeed the research focus for the present inquiry, was not determined a priori, but emerged in the process of the inquiry itself. The key

themes listed above were originally sketched out by the generalised concerns of higher education research stakeholders which were recorded in the reconnaissance activities for this study. These concerns were identified by the author in records of interview and public forum comment, from individuals representing a wide range of roles and responsibilities in higher education research. The original concerns of these stakeholders, provided the present study with an inquiry focus that could serve as, 'a starting point for negotiating a shared action research project.'<sup>137</sup> The following chapter describes how this starting point for negotiation was arrived at and how, through an iterative process, the final form of the thematic concern<sup>138</sup> for the inquiry was defined.

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<sup>137</sup> Kemmis, S. & McTaggart, R. op. cit., p.94

<sup>138</sup> Ibid.



## CHAPTER 5

### CLAIMS, CONCERNS AND ISSUES IN FRAMING THE INQUIRY QUESTION

The key question to be addressed in an action researching study such as this, is not determined *a priori*, but is illuminated in the inquiry processes as patterns of significance emerge.<sup>1</sup> Likewise, the involvement of participants with whom the study will be undertaken, is a function not of predetermined selection criteria, but of alignment between the problems that are confronted by individuals in their day to day social practice and the thematic concern<sup>2</sup> of the study. The credibility of the inquiry itself is judged, in part, by an examination of the processes involved<sup>3</sup> in generating the inquiry question. This chapter describes the information which led to the initial framing of the research question, the characteristics of the participants who took part in the study, and the iterative process by which the inquiry focus was refined. The inquiry focus was refined, over time,<sup>4</sup> to be expressed as a thematic concern about the efficacy of quality appraisal practices for higher education research.

#### Refining the Inquiry Focus - an Action Researching Process

Action research is a process in which the theory generated in the inquiry activities, is grounded in the action of everyday practice. As such, this type of theory is termed 'grounded theory'.<sup>5</sup> Grounded theory research, such as that of Strauss and Corbin,<sup>6</sup>

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<sup>1</sup> Kemmis, S. & McTaggart, R. (1988) op. cit., Chapters 1 & 3.

<sup>2</sup> Ibid., p.9.

<sup>3</sup> Guba, E. G., & Lincoln, Y.S. (1989) op. cit., p. 244.

<sup>4</sup> Ibid., p. 40.

<sup>5</sup> Strauss, A. & Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Sage, Newbury Park, California, p.24.

<sup>6</sup> Ibid, pp.23-32.

seeks to explain and to theorise everyday social action and it was in the language of grounded theory which the original inquiry focus was framed (Appendix 1). According to the work of Strauss and Corbin, a grounded theory of quality appraisal for higher education research would be one;

. . .that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory, stand in reciprocal relationship with each other.<sup>7</sup>

This methodological stance has important consequences for the way in which the inquiry is conducted. One does not begin with a theory, then prove it. 'Rather, one begins with an area of study, and what is relevant to that area is allowed to emerge.'<sup>8</sup>

It is this action of using current understandings to build new understandings or grounded theory, that characterises the role of human-as-instrument for inquiry purposes.<sup>9</sup> Although the primary 'instrument' in this inquiry process was the researcher, the voice of the researcher is but one among the many voices that are represented in the thesis. For this reason, and to avoid confusion of identity with other researcher participants, the researcher is referred to, in the thesis, as the author. The dialectical tacking<sup>10</sup> between the author's own presuppositions, the understandings of those involved or represented in the reflective inquiry, theoretical literature and policy documents, was the process by which the key inquiry questions listed in the Introduction, emerged. As Kaplan notes;

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<sup>7</sup> Ibid., p.23.

<sup>8</sup> Ibid.

<sup>9</sup> Guba, E.G. & Lincoln, Y.S. (1981) *Effective Evaluation : Improving the Usefulness of Evaluation Results Through Responsive and Naturalistic Approaches*, Jossey-Bass, San Francisco, California, Chapter 6.

<sup>10</sup> Geertz, C., 'From The Native's Point of View' quoted in Bernstein, R.J. (1983) *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis*, Basil Blackwell, Oxford, England, p.133.

We presuppose, in every inquiry, not only a set of data, but also a set of generalisations, both about our materials and about the instruments by which they are to be transformed into the cognitive enterprise. We draw our presuppositions from earlier inquiries, from other sciences, from everyday knowledge, from the experiences of conflict and frustration~~which~~ motivated our inquiry, from habit and from tradition . . .<sup>11</sup>

This is the nature of human-as-instrument, so the introductory section of this chapter on framing the inquiry question makes explicit reference to those presuppositions which the author brought to the inquiry. The point of making such information public is that once open to scrutiny, such presuppositions can be critically challenged and in the process of the inquiry, either confirmed or disconfirmed as valid claims about the thematic concern which is the object in question. As described by action researchers Kemmis and McTaggart,<sup>12</sup> a thematic concern is one which emerges through the clarification of concerns generally shared by a group. The author's framing of the study, prior to commencement of fieldwork activities saw the language of grounded theory translated into that of quality appraisal of learning communities (Appendix 2) and a closer focus on developing indicators for research strength profiles.

The continual generation of questions, which lead to insights and successive ways of framing the inquiry, was central to the type of action in which participants, author included were involved in, with this example of grounded theory research. Strauss and Corbin, in their chapter on 'Enhancing Theoretical Sensitivity',<sup>13</sup> emphasise the importance of generating questions which guide the inquiry process. Key questions and insights which directed initial reading and information-seeking for the author, and

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<sup>11</sup> Kaplan, A. (1964) *The Conduct of Inquiry: Methodology for Behavioural Science*, Chandler, San Francisco, California, p.88.

<sup>12</sup> Kemmis, S. & McTaggart (1988) op. cit., p.9.

<sup>13</sup> Strauss, A. & Corbin, J. (1990) op. cit., pp.77-81.

influenced the shaping of the research question, were recorded in a Project Journal,<sup>14</sup> that served to record over time, what has been termed ‘progressive subjectivity’<sup>15</sup> or the author’s developing construction of the inquiry reality. These key questions and insights demonstrate the way in which the author framed concerns about higher education research, prior to commencement of the focused fieldwork interaction, for the present study. The Journal entries represent the author’s reflections on initial reconnaissance activities,<sup>16</sup> as well as the Dawkins White Paper and subsequent policy statements, literature in the field of research policy and practice, and the relevant dialogue in the public press. It was from such reflections and the information gained in initial reconnaissance activities,<sup>17</sup> that provided the background to the author’s initial mapping of the thematic concern for the present study (Appendix 3).

The Project Journal included questions about the efficacy of theories of action underpinning the selectivity and concentration of research, in competitive funding environments, at both the level of Government policy level and at the level of the institution. The apparent divergence between emerging frameworks for legitimation and reward of research, at the level of the institution was of particular concern. At this level, questions asked by the author, in the Project Journal, included reference to themes such as:

- The impact of different ways of framing quality on creativity and innovation in research practice;
- The form of an evaluative *language* appropriate to quality appraisal of higher education research activities; and
- The nature of *social relations* that would facilitate creativity and innovation at the level of practice (Appendix 4).

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<sup>14</sup> Kemmis, S. & McTaggart, R. (1988) op. cit., p.50.

<sup>15</sup> Guba, E.G. & Lincoln, Y. S. (1989) op. cit., p.238.

<sup>16</sup> Di Chiro, G, Robottom, I & Tinning, R. in Kemmis, S. & McTaggart, R. (1988) op. cit., pp.133-136.

<sup>17</sup> Ibid.

At a broader systems level of Government policy, the impact of competitive funding mechanisms, shaped as they were by economic and political imperatives, was a central concern. This concern was translated into a model, by the author, for analysis of research environments as learning communities (Appendix 5). In the Journal entries related to this concern, the author posed the following questions about competitive funding mechanisms:

- Was there the potential for ‘tunnel vision’ in research productivity demands, in the context of limited funding cycles?
- Would ‘sedimentation’ of expertise in established peer review networks be an issue when such networks were used for research funding allocation purposes?
- Would new researchers be confronted with insurmountable barriers because of the nature of research funding mechanisms?
- Would structural changes in higher education present opportunities for creative leadership to facilitate innovative and creative research, or would these new structures simply become strategic tools for instrumental control of research?
- In the context of structural change, was there the potential for incongruity between the timeframes of performance-oriented managerialist cultures, and the qualitatively different timeframes of creative and innovative pursuits?
- Could a variance in timeframes ultimately create intolerable conflicts between research policy makers, administrative managers of research, and the leaders of research enterprises ? (Appendix 6)

The initial framing of the thematic concern for the study was based on questions such as these. However, it was the information generated specifically in the preliminary reconnaissance activities, that gave the inquiry its initial direction and focus.

### **Preliminary Reconnaissance Activities**

The following account provides an explanation of preliminary reconnaissance activities which preceded the four phases of the focused fieldwork processes. The preliminary reconnaissance for the inquiry was carried out in a single university setting other than the

one in which focused fieldwork activities for the study were undertaken. This reconnaissance of research in higher education was undertaken in order to build the author's understanding of the theories of action shaping what is, and is not, valued in the current legitimization and reward systems for higher education research. This information, which included claims, concerns, and issues,<sup>18</sup> regarding higher education research, was used as a resource for both refining the inquiry focus, and identifying potential participants.

Refining the focus was a necessary prerequisite to setting tentative directions for interaction and inquiry processes. Using the definitions provided by Guba and Lincoln<sup>19</sup> as a starting point, *claims*, in the present study, were taken to be any assertions that stakeholders made which described effective action for research. *Concerns*, on the other hand, were the assertions stakeholder's made about action that constrained or undermined effective research practice. Finally, any state of affairs which resulted in a difference of opinions about the nature of effective action for research practice was taken as the presence of an *issue* that needed to be considered. It was these claims, concerns and issues, expressed by a range stakeholders in higher education, that provided the initial 'map' of the territory and points of significance for inquiry purposes. Information was derived from interviews with a range of stakeholders in higher education research. The roles of those represented in discussions and information exchange forums included:

- Vice Chancellor (VC)
- Deputy Vice Chancellor (DVC)
- Pro Vice Chancellor (PVC)
- Dean of Graduate Faculty
- Research Manager/Administration
- Leading researchers/research managers

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<sup>18</sup> Guba, E. G., & Lincoln, Y.S. (1989) op. cit., p. 40.

<sup>19</sup> Ibid.

The following interpretive account of interview data, gathered in the preliminary reconnaissance phase of the inquiry, provides an indication of the language, activities, and social relations characterising research-related interests, at the institutional level, prior to the commencement of the focused fieldwork. The statements were grouped according to the the action researching categories of language, activities and social relations,<sup>20</sup> as a means to drawing an institutional profile. As such, the insitutional profile was organised in a way that reflected directly, the inquiry framework employed by the action researchers, Kemmis and McTaggart.<sup>21</sup> The stakeholders, whose statements are quoted within the three categories of action described by the author, are referred to by an alpha-numeric identifier eg. R#1. The 'R' signifies 'reconnaissance' and the number, the person concerned.

### **A Language to Describe what is Valued in Higher Education Research**

In terms of a language or discourse of legitimation and reward, the critical importance of the institution attaining and maintaining a 'winning edge' was a strong theme that emerged from senior executive levels during reconnaissance activities. The ability to attain a 'leading edge' was seen as critical to institutional survival in an environment of competitive funding and shrinking resources. One administrative research manager noted that, 'visibility' was now a central concern. This stakeholder went on to explain;

The identification of research potential is now becoming an important factor in research funding. With shrinking resources, senior research managers are being forced into a position where they literally have to "pick winners". (R#4)

In this statement, there was every indication that a 'coalition' was developing between institutional managers and the government policy makers. The indication was that

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<sup>20</sup> Kemmis, S. & McTaggart, R. (1988) *op. cit.*, pp. 34-35.

<sup>21</sup> Ibid

selectivity and concentration were shaping priority setting for legitimation and reward at the level of research practice. The information available for ‘picking winners’ was output-oriented, performance-based quantitative data. In a highly competitive funding environment, institutional research managers have been placed in a position where they are increasingly dependent upon performance indicators for priority-setting and resource allocation decisions. The previously-quoted administrative research manager commented on the difficulties that were involved in such decision-making processes. He observed that;

Standard indicators of research performance are of little use when it comes to predicting performance . . . One of the key issues being faced within the institutional research management structure at present, is how to determine which are ‘best practices’. (R#4)

Just how many areas of excellence could be supported within the institution, was considered by one senior research manager to be an overriding consideration. This stakeholder commented that diversity of research effort, ‘governed by an eccentric mix of staff interests’ (R#7), is no longer a viable option. Strategic action on the part of institutional administrators in reorienting practices, was considered a necessary aspect of their responsibility for institutional survival. Currently, according to a second administrative research manager (R#3), in order to raise institutional profiles, institutions were claiming that funded, unfunded, and scholarship-oriented research, were *all* research.

As a result of these observations, the concern for the present study was that the orientation of research managers, evidenced in these comments, revealed a strong institutional interest in performance, primarily, for the sake of the *institution’s* profile. In these performance-oriented claims, there was an absence of any reference to the type of support required for continuity and coherence of fields of research. If knowledge that serves institutional profiles was privileged, at the institutional level, over knowledge that served cultural



reproduction of innovative resources, then such resources may well be put at risk. If 'visibility' was the central concern, then what was it that ought to be 'visible' if the activities, discourses, and social relations that support growth in knowledge, and hence visibility, were to be sustained?

### **The Activities that are Valued in Higher Education Research**

Indications of institutional practices employed in legitimating and rewarding research, were also evident in the preliminary reconnaissance activities. There appeared to be, in the claims and concerns indicated, an uncontested coalition between institutional managers and government policy-makers that was shaping the strategic action of institutional managers. One senior executive commented that;

. . . the government position is to say - What do we WANT to do research in at the present? What COULD we do research in? This is the basis of decision-making regarding research support [at the institutional level] . . . The trick is to present key research areas (profile) in a way that you will get a few winners. (R#5)

On the other hand, there were senior executive; notably the new management layer of PVCs Research, who saw their primary responsibility as that of facilitating quality research. One person in this position indicated that 'there has been too strong a push for dollar-oriented research productivity.' (R#6) A leading researcher (R#2), explained how this 'push', referred to by the senior executive, was affecting the very nature of knowledge production. He claimed that the focus, selection, and direction of research, were all being affected by the institutional 'push' for research dollars. In this context, early recognition of emerging fields with little promise of immediate financial returns was difficult to achieve. Because of the problematic situation created by the 'dollar push', this researcher believed that new technologies with potential for future growth and development, could tend to 'slip behind the leading edge'. Furthermore, the difficulty for

innovative researchers was that in the current funding climate, research without the ‘promise of commercial return’ could be ignored because other criteria [for merit and worth] are ignored’. (R#2) This research leader noted that;

DITAC [the then Department of Industry, Trade and Commerce] funding criteria and policies define ‘research’ as incremental research - by virtue of the funding periods - it can’t be basic, reconceptualising, innovative research . . . There is a trap in just building on existing technologies and only funding the type of research that can be completed in a limited time frame. (R#2)

The danger that this type of ‘steering’ presented, according to this same research leader, was that creative researchers would be shut out of the system. If bureaucracy took precedence and incremental research became *research*, then we would be caught out as a researching nation. (R#2) Another research leader/manager commented that;

I am very worried that research in this university will only be valued if it attracts funding. Quality and quantity of publications MUST be important, but the way this measure is used here is crude and unhelpful.’ (R#10)

The espoused theory of action employed by institutional administrative managers, was that they did not pressure researchers to carry out applied work. At the level of theory-in-use, however, the stated intention was to ‘pressure an academic community to balance interests in pure and applied research’. (R#5) This could prove to be a difficult balancing act. As one leading researcher claimed, research management now required the ‘ability to drive towards a specific goal while still keeping research options and potential open . . . spin-offs could be developed - the spin-offs then providing the bread and butter research to pay for the creative options.’ (R#2)

It became evident to the author, in these reconnaissance activities, that the perceived ‘sustainability of research strengths’ was increasingly steering resource flows for research at the institutional level. (R#4) The strategic action of institutions in aiming for increased postgraduate enrollments was an example of institutional research strengths being pressed into the service of institutional ‘market success’ in attracting available government funds. One administrative research manager proposed that;

. . . if universities are to survive in a very competitive environment they will need to have high numbers of postgraduates. This is what will give the university the ‘winning edge. (R#8)

However, departments were experiencing difficulty in funding postgraduate research because of inevitable shortfalls and shrinking infrastructure budgets. While postgraduates attracted a higher level of funding and prestige for the university, research students were the most expensive students to service. (R#8) To a certain extent, the quality of postgraduate research environments was dependent upon the success of researcher/supervisors in attracting research funding for the broader research programs in which the students were involved. Erosion of infrastructure funding, combined with increased student numbers meant that this type of funding was a necessity, if the quality of research environments was to be maintained or enhanced.

One administrative research manager (R#3), commented that the New Universities were joining the research funding ‘race according to the same game rules as the older universities because research was now equated with status’. According to this same stakeholder, the result is that a lot of people who shouldn’t be doing research are applying for competitive grants. According to this administrative research manager, research grants were the ‘only avenue for increased infrastructure funding, so the necessity to apply is being forced onto academics.’ (R#3)

It was evident from these comments that both the practices, and the social orders considered legitimate for higher education research, at the institutional level, were

becoming a site for contestation. The concern for the present study was that new legitimisation and reward structures could undermine coordination of action in the social relations of knowledge, as well as destabilise the identity of research groups. In other words, it was possible that the choices institutional and research managers made in a climate of restricted funding, would impact negatively on the type of social integration that was necessary for sustainability of effective research practice.

### **The Patterns of Social Relations Shaping what is Valued in Higher Education Research**

Strains in the fabric of higher education research were also apparent in the *social relations* of legitimisation and reward at the institutional level, during reconnaissance activities. The problem for institutional management, expressed by one senior executive, was that the type of across-discipline research favoured by government funding schemes was perceived to be ‘an encroachment of academic turf’. (R#5) Researchers were viewed, by some administrators, as difficult people who couldn’t cooperate ‘for the sake of providing research that the government deems necessary or appropriate at the time.’ (R#5) However, as one senior researcher noted, ‘Researchers operate in an environment which does not reward collaboration in terms of career advancement and recognition.’ (R#2)

Senior executive, faced with expanding demands for resources and a shrinking public purse were exhorting researchers to be entrepreneurial. The indication was that there was ‘money out there’ and researchers had the potential to attract external funding. (R#4) In particular, it was considered that research Centres should have as their primary aim, securing contracts with external funding. (R#5) However, the messages were mixed. Even if senior researchers were successful in attracting funds, there was no guarantee that institutional executive would support these programs. One senior executive went so far as to say that;

. . . there is a lot of money out there in search of good research - these sources need to be tapped. Centres have to rely on this source of funding . . . The university can’t be giving funds to Centres. The funding the university receives

is for teaching. Funds cannot be directed to Centres whose primary activity is research. This is a luxury. (R#5)

The practical outcome of Dawkins-inspired funding policies has been, according to the leading researcher quoted previously, decreased job satisfaction, erosion of facilities and resources, decrease in time dedicated for research, and lowering of levels of remuneration for work undertaken. (R#2) Researchers saw, that with increasing pressure to 'do more with less', there was reduced opportunity for 'the interplay between minds that helps people to be more creative'. (R#1) The social relations of knowledge, according to this research leader/manager, do not respect office hours and cannot be arbitrarily confined to institutional funding cycles. He noted that;

I may have had a conversation yesterday, the day before or a week ago and the conversation. . . has left me worrying about something. I can never tell when this switch in my mind is going to switch on and I find a new inspiration or a new concept develops. (R#1)

These claims and concerns demonstrated that the reason institutions valued the ability of researchers to attract extra research funding, was to boost institutional profiles and infrastructure funding. Researchers, it appeared however, were operating on a very different system of motivation and reward. The inspiration that came from one significant conceptual breakthrough could fire creative and innovative activity for a whole lifetime. Although facilitated by funding flows, this type of 'reward' was qualitatively different from, and independent of, economic reward.

Once they discover some creation of theirs gives not only themselves satisfaction, but others too, then that's a continuous spur to keep going and thinking further and further along that track. (R#1)

Moreover, personal growth of understanding in the social relations of knowledge was internally related to sustainability and renewal of knowledge-generating resources because it was translated into interactive capacities for furthering knowledge growth.

Leadership is the capacity to inspire others. Research leadership has a large component of the ability to transfer that enthusiasm that is within the person who's been creative, who's thought of something radically new, to pass that on to others. It may be students. It may be younger colleagues. Because usually, older colleagues tend to be cynical and skeptical. The role of a good research leader is to be continually challenging, not dominating the minds of his colleagues. (R#1)

This same research leader/manager bemoaned the fact that in these times of economic stringency, when funds were scarce, it was really hard to attract funding for creative work. The concern for the present study was that there appeared to be an absence of support for the type of activities that nurture and sustain the interactive capacities necessary for the relations of knowledge. If this was the case, at the level of practice, then continuing enhancement and renewal of researching capabilities could be put at risk.

In summary, the claims, concerns and issues raised in the preliminary reconnaissance activities, alerted the researcher to instances in which there appeared to be the potential for:

- Erosion of continuity and coherence of fields of research;
- The emergence of disintegration and conflict in contexts of research practice; and
- Legitimation and reward practices to be devoid of the nurturing of interactive capacities necessary for the social relations of knowledge.

As a result of these preliminary reconnaissance activities, the thematic concern for the present study was focused more closely on the impact of Dawkins and post-Dawkins government policy initiatives, on the structuring of quality appraisal practices in higher education research. This concern derived from the fact it was apparent in the initial discussions and recorded comments, that the Dawkins policy initiatives had brought about unprecedented change in the organisational structures of higher education research. It was the impact of these structural changes at the level of practice within institutions, which set the boundary for inquiry purposes, as that of the institution.

## **Patterns of Significance Guiding Selection of Host Institution**

As was evidenced in Chapters 2 and 3, higher education policy imperatives are mediated and translated into local structures of significance at the level of the institution. Taking into consideration the imperatives of the Dawkins papers, the institution most likely to provide answers to the questions generated in the reconnaissance activities, would possess the following characteristics:

- A pre-1987 university with an established research culture. This was important because the study was interested in the impact of policies on research environments rather than the establishment of new research cultures.
- Receiving infrastructure funding through Mechanism A at the time the study was initiated. The type of funding was important because it was the relationship between infrastructure funding and Mechanism A funding that was of particular interest to the study.
- Relatively unaffected by amalgamations. It was important that the institution concerned was historically, a single entity in order to avoid the complexity of multiple and perhaps, conflicting cultural perspectives on research, at the level of the institution.

Further considerations, given the questions that needed to be answered in the inquiry, were that the institution in which the study was to be carried out should be one that was:

- a medium to large size institution, because small institutions would be unlikely to have the diverse faculty mix which was required for the study;
- an institution that had been successful in attracting a higher than average level of ARC funding as an indication of research excellence, because the study was to focus on effective action for research; and
- was receptive to and supportive of the proposed study, because an action researching study requires that those who participate have an interest in the study and a desire to participate for their own benefit.

Finally, the institution in which the study was to be carried out, also needed to be one which was located primarily within a single geographical boundary because the fieldwork processes would involve interaction with a number of diverse research groups.

All of these characteristics were present in one particular institution and when an approach was made to the Deputy Vice Chancellor Research, concerning the institution's participation in the study, the response was positive. Having secured an undertaking for the institution to be involved in the study, a number of preparatory discussions were organised with past and present members of academic staff from this institution.

### **Reconnaissance Activities Host Institution**

In order to build a preliminary, but very tentative, picture of the host institution, the researcher contacted, or arranged participation in public forums, with a number of academics, who were either previously or currently associated with the institution. These people, apart from the VC, were readily accessible within the author's current network and included:

- Current VC.
- Foundation staff member now working in another institution.
- Ex Head of School now working in another institution.
- Lecturer/researcher currently employed in host institution.

Members of the university community to whom an approach was made were asked simply to describe their personal experience of the culture in the host institution. Access to the VC's theory of action for higher education research, was gained through a public forum held at the institution to address the changing nature of universities. The claims, concerns and issues listed in Appendix 7, provide both an outline of the institutional history and the current culture.



Unlike at the institution in which preliminary reconnaissance activities took place, the discourse of legitimation and reward in the host institution was apparently supportive of creative and productive contestation. This support was reflected at the executive level of research management. The DVC Research was credited with cutting across ‘Dawkinsisms’, in order to maintain a scholarly tradition within the institution. There was a general acknowledgment, however, that the institution had taken many years to establish itself and to emerge as a real strength in higher education. Having been established in an era where there was a shortage of academics, the legacy of these early days was that the acquisition of high calibre staff took some time to achieve. A drive for research staff in the eighties only began to pay dividends, over the years, as these researchers established their programs. Contestation within the institution was not, however, always creative and productive.

The current VC was seen, by some colleagues, as having management and performance-oriented priorities which have crystallized hostility. However, in a public statement, the VC indicated strong endorsement for centres of academic excellence. The VC saw that such centres should be supported in order to; retain teams of experts, develop postgraduate education, and contribute to the *cutting edge* of research skills. In spite of this publicly-stated theory of action, it was suggested by academics involved in these preliminary reconnaissance discussions, that both infrastructure and teaching agendas were being downgraded under the VC’s influence.

The Research Management Unit, within this institution, was seen as highly supportive of research activity within the institution, and as presenting a strong research profile. The DVC Research was praised for his active role in research and acknowledged as a ‘good researcher’. In contrast with these positive comments about the supportive activity of the Research Management Unit, there was also an indication of low morale in the academic community generally. For some academics, lack of direction and an inability to attain desired standards, and absence of support for daily practice, was resulting in disillusionment and a desire to ‘move on’.

Historically, a *laissez-faire* approach to institutional management, on the part of a foundation VC, had meant that the original research centres were independent, autonomous, and driven by the entrepreneurial interests of their leaders. Centres that became established under the guidance of these high profile academics, set a tradition for the institution of active, community-oriented research. In the past, the institution had tended to place excellence above relevance, when considering the intrinsic value of activities for institutional prestige. This precedence afforded to excellence, may in part be explained by the ‘inferiority complex’ said to have characterised this university’s historical relationship with other, well-established institutions of higher education. It appeared, however, that the confrontation currently being experienced within the university, was not stemming from academic personnel, but rather, was of a ‘top down’ nature. The current VC was seen to have generated hostility, by imposing a management culture that didn’t fit comfortably with the established academic traditions of independence and autonomy present from the institution’s beginnings. The DVC Research was viewed as being ‘caught in the middle’ of this clash of cultures.

Each of the academics involved in these preliminary discussions mentioned, specifically, a number of what they considered to be exceptional research leaders, as well as the significance of the research achievements which these identities had been, or were currently, involved in. While the names of the research groups remain confidential, their nomination was a guide to which researchers and research groups were considered, by the community of academics, to represent research excellence within the institution. With the exception of one group, which was identified because of the prestige it brought to the university, all other groups were reported as having a strong involvement with practical, community-oriented interests and activities related to their respective area of inquiry.

For the purposes of the present study, the key themes that emerged in these discussions were ;

- The positive claims concerning the attitude and capabilities of the DVC Research.
- Discord introduced with the VC’s managerialist framing of institutional management.

- The presence of leading-edge, community-oriented research leaders.
- Ongoing strategic action directed towards strengthening of a research culture.
- Co-occurrence of, on the one hand, problematic areas of discord, disillusionment and low morale and on the other, the continuing success of energetic, entrepreneurial, leading edge research groups.
- The importance of the applied aspects of research practice for legitimization and reward in this institutional culture.

The published history of the institution,<sup>22</sup> served only to strengthen most of the claims that were made by the academics who had been, or were still involved with the host institution. The founding philosophy of the university was one which tended away from specialisms in favour of work at the ‘borders of disciplines’, a notion symbolised by the original commitment of the university to a single undergraduate degree. The inextricable link between teaching and active research, was strongly supported as the basis for extension of knowledge. The key theme of the institution’s early philosophy was that of *opportunity*, and educational experiences which provided an alternative to those offered by the *classical* university. Educational liberalism, in the form of assured access to those who would normally be unable to attend university, was central to the institution’s platform. This position was exemplified by special attention to the education of women. Liberalism continues to be an integral part of the cultural structures of the institution, expressed frequently in contestation, or outright conflict, amongst strong individuals.

In the light of this historical perspective, and from the earlier discussions in the reconnaissance phase, the decision was made to frame the inquiry in terms of management, leadership and communication for higher education research. Initially, these appeared to be the key themes which needed to be explored, if the present study was to come to an understanding of effective action for research at the level of the institution (Appendix 8).

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<sup>22</sup> For confidentiality purposes, the name of this publication has been with-held.

## Patterns of Significance - Participant Inclusion Dimensions

For the purposes of the present study, it was considered necessary to include the widest variation in researching activities, and ways of organising for research, that the institution had to offer. This was necessary in order to fulfill the obligations of inquiry design, which entailed gathering as many different constructions of the claims, concerns and issues as was possible.<sup>23</sup> Variation amongst research groups was sought on the criteria listed in Appendix 9, participant inclusion dimensions. The table of continua was developed using; the work of Becher,<sup>24</sup> research policy documents released since and including the Dawkins White Paper, the work of French and Bell<sup>25</sup> on organisations, and the author's practical experience of different research environments.

In preliminary discussions with the DVC Research of the host institution, seven groups were identified as potential participants. Some of the groups with a greater emphasis on applied research, such as those in the Social and Biological Sciences, included researchers whose work spanned a range of discipline areas. At the level of research practice, this meant that researchers in the suggested groups were engaged in work in one or more of the following fields of research:<sup>26</sup>

- **Humanities** - Language and Literature, Historical Studies, Archaeology and Classical Studies.
- **Social Sciences** - Political Science and Public Policy, Sociology, Anthropology, Social Studies, Population Studies, Psychology, Education.

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<sup>23</sup> Guba, E.G. & Lincoln (1989) op. cit., p.204.

<sup>24</sup> See Becher, T. (1989) op. cit.

<sup>25</sup> See French, W. L. & Bell Jr, C. H. (1984) *Organization Development: Behavioural Science Interventions For Organization Improvement*, Third Edition, Prentice-Hall International, Englewood Cliffs, New Jersey.

<sup>26</sup> Australian Bureau of Statistics (1993) *Australian Standard Research Classification 1993: A set of classifications for R&D projects*, ABS Catalogue No. 1297.0, Commonwealth Government Printer, p.7.

- **Medical and Health Sciences** - Public Health Research, Health Services Research.
- **Biological Sciences** - Genetics/Molecular Biology/and Biotechnology, Microbiology, Zoology, Ecology.
- **Information, Computer and Communication Technologies** - Communication Technologies.
- **General Engineering** - Electrical and Electronic Engineering.
- **Earth Sciences** - Geology, Geography, Atmospheric Sciences.

### **Framing the Inquiry for Initial Dialogue Purposes - First Iteration**

At the time of the initial approach to the institution for participation in the study, an information booklet was provided for the PVC Research. This included a statement of nature and purpose of the study:

PhD Research Program : Fieldwork Proposal

A collaborative analysis of the conditions which different leadership, management and communication patterns provide for development of researching capabilities, as a framework for generating relevant and appropriate appraisal mechanisms.

The rationale for study was explained as follows :

There are two kinds of knowledge generated in the research process. The first type of knowledge is that which accrues in relation to enhanced understanding or growth in knowledge about the world. The second type of knowledge which accrues is that related to the researching process itself. This second type of knowledge is the basis of growth in researching capability. It is relatively straightforward to generate key indicators of productivity with the first type of knowledge, and although inherent problems are well documented, such measures provide the current framework for judging research strength, quality and productivity. It is however, much more difficult to find a framework in which research strength and productivity judgments can be made about the conditions which best facilitate growth in researching capability. The major contribution of higher education researching systems to the national research and development effort is the provision of conditions which facilitate growth in this value-added research productivity. These 'conditions' however are conspicuous by their absence from research strength and research productivity criteria in the competitive funding arena.

The expected inquiry outcomes were explained in the following way :

By illuminating a profile of research leadership, management and communication patterns responsive to the requirements of program-specific researching capability development, it would be possible to generate productivity indicators relevant to the value-added level of research. Such indicators could provide a complementary account of research productivity to be considered in parallel with primary knowledge output indicators. They would have the added advantage of providing a means for valuing the input of people just as much as the output of research products. Indicators relevant to the value-added level of research could serve to pave the way for developing self-critical and self-improving, researching communities, within Higher Education. Availability of collaboratively-generated data concerning the conditions which foster development of researching capability would enable stakeholders within the research enterprise to make much more informed decisions concerning:

- The contribution of higher education researching systems to the realisation and renewal of creative and innovative resources
- The contribution of particular leadership, management and communication strategies for the institution and research activities concerned
- The appropriateness of a collaborative methodology for identifying and defining infrastructure requirements for research programs within the institutional research profiles concerned
- The informed use of resources to create enabling and supportive researching systems that acknowledge universities as learning communities and ensure continual improvement in researching capability

The information booklet also included:

- An annotated bibliography;
- An outline of the methodological approaches intended for the study;
- A conceptual map of the thematic concern from the perspective of the researcher;
- Participant profile dimensions; and
- The author's tentative description of the types of action that would be involved in describing and explaining researching capability.

While the groups or collectives mentioned by the DVC Research, in initial discussions, covered a wide range of knowledge bases, they also varied greatly in terms of leadership

styles, management practices and organisational structures. The following groups or collectives, suggested by the DVC Research, represented a range of distinctly different research contexts. The term 'group' was used in the present study, purely as a collective noun to indicate the respective sets of participants from different contexts of research, taking part in the study. It was not used to designate an organisational or a social structure that was common to each. In this respect, the term 'group' was used only as a signifier that the individuals concerned were, when taking part in the present study, working on the same field of research.

The following descriptive accounts from the author's journal, indicate what was known about the respective groups prior to initial approaches by the author for participation in the present study.

#### *Research Groups or Programs Approached for Participation*

##### *Research Context 1:*

A program under the leadership of a highly qualified and well-respected international scholar. Group includes a senior researcher who has a great capacity to undertake work and report back quickly. The current research program is part of an ongoing tradition with a prestigious history. The work of the group is highly rated and well-supported financially from both internal and external funding sources. External sources include the Australian Research Council and a Foundation specifically set up to support an interest in this field of research. The group attracts funding within the institution because of the prestige it brings to the university. According to the Australian Bureau of Statistics (ABS) Classification, this research would be categorised as Pure Basic.<sup>27</sup>

##### *Research Context 2 :*

An emerging group which has a unique way of operating. It is funded as a collaborative, multi-site, national research program with the principal partner in

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<sup>27</sup> Ibid.

another university. The program applies a social framework to an epidemiological problem. They are implementing a multidisciplinary approach and working in an emerging paradigm. This group is involved in both prevention and education programs and is operating continually, on short-term deadlines. Those involved in the group are highly politically motivated and very committed. Most group members have a personal stake in the research and there is a collective shared purpose with egalitarian work-practices and organisational arrangements. According to the ABS categorisation, this research spanning both the Social and Medical and Health Sciences disciplines, would be categorised as Applied research.

#### *Research Context 3 :*

A group with clear and decisive guidance by a very strong leader with a natural talent for leadership. The group is made up of an enthusiastic team of 'eager beavers'. The leader's management style is such that while there is a strong sense of direction and focus, each individual researcher is allowed to follow their own lead and to build on their own interests. This research program involves equipment with a very high level of sophistication. According to the ABS classification, the research carried out by this group spans Information, Computer and Communication Technologies and General Engineering disciplines and ranges from Strategic Basic through to Applied and Experimental Development research.

#### *Research Context 4 :*

A very recently established organisational unit working on a multidisciplinary research program that includes both teaching and curriculum development. Participation in research activities is problem-centred and group membership varies according to the knowledge, skills and capabilities that are relevant to the task. Numbers of participants vary greatly as do sources of funding depending on the research problem. There are strong links with researchers in other disciplines, institutions, industry and public utilities. Although there is a nominal Head of the Unit, the system of organisation for research is very much an open and fluid one. According to the ABS Classification, these researchers in the discipline of Biological Sciences, would be involved in all four categories of research; Pure Basic, Strategic Basic, Applied and Experimental Development.



### *Research Context 5 :*

A research program organised on a strong professorial model with a mechanistic organisational structure. Because of the nature of knowledge involved, the research is necessarily an international concern, but the group has made significant contributions to informing related areas of government policy at the national level. The leader's level of influence and recognition is reflected in the wide range of funding organisations including federal government, public utilities, the commercial sector and international sources. Because research funding continues to be at a high level, this enables the research program to contribute to the support of postdoctoral fellows and research assistants. An increasing proportion of the area's funds stems from research contracts with Australian and overseas industrial organisations for leading-edge modeling activities. According to the ABS Classification, these researchers in the Earth Sciences discipline would be involved in pure-basic and strategic basic research.

### *Research Context 6 :*

A Key Centre for teaching and research led by a strong entrepreneurial figure with many international connections. Much of the work at the local level is handled by the Deputy Director and the Research Co-ordinator. There is a great deal of pressure for this Centre to be self-funding but the sources of this pressure are not readily apparent. The Centre appears to have a 'life and a mind' of its own. The DVC Research has been associated with some aspects of the research undertaken by this group. Because of the nature of the program, the Centre has substantial government, community and industry linkages and strong interests in professional development and related publications. According to the ABS Classification, these researchers in the Humanities would be involved applied research.

### *Research Context 7 :*

A focused, highly organised and thoroughly professional research enterprise. The group is described by the DVC Research as 'consummate professionals'. The research program is concerned with fundamental large scale problems. The Centre provides a formal identity for related research areas and facilitates negotiations for research funds and equipment with local, national and international institutions and agencies. According to the ABS Classification, these researchers in the discipline of Earth Sciences would be involved in pure basic and strategic basic research.

Each of the listed groups was; invited to participate in the study and provided with an information booklet (Appendix 10) and a covering letter from the DVC Research (Appendix 11). Five of the groups indicated their willingness to be involved, and expressed an interest in the potential outcomes of the study for their own purposes. At the commencement of focused fieldwork with participating groups, the following fields of research were represented :

- Group 1     -     Humanities (pure basic research).
- Group 2     -     Information, Computer and Communication Technologies and General Engineering.
- Group 3     -     Social and Medical and Health Sciences.
- Group 4     -     Biological Sciences.
- Group 5     -     Humanities (applied research)

These five groups provided the study with a wide range of research activities in very different knowledge bases, and represented distinctly different organisational structures and work practices. The Research Management Unit was the sixth organisational unit to be involved. As indicated in the reconnaissance activities, this Unit was considered, by some, to be caught between answering to the needs of researchers and the managerialist imperatives of the senior executive.

### **Framing the Inquiry - Second Iteration**

Following approaches to members of each of these groups regarding their participation in the study, the initial rounds of interview/discussion sessions were carried out. These interview/discussion sessions demonstrated that there was a wide range of both similarities and differences between the discourses, activities and social relations of the respective groups. Discussions also demonstrated that current performance indicators were of limited use in covering the diversity of quality appraisal requirements at the level of research practice.

Following the completion of Phase 3 of the study, the inquiry was reframed as an investigation of 'Quality Environments For Higher Education Research'. The rationale for reframing the inquiry in terms of quality research environments was that it became evident in Phase 3 that the provision of conditions which facilitated the essential processes, and therefore the invisible product of higher education, were an essential precondition for effective research practice. The Journal entry relating to this reframing of the inquiry focus is provided in Appendix 12.

### **Framing the Inquiry - Third Iteration**

In Phase 4 of the study, the inquiry question was further refined to focus quite specifically on the appraisal practices for higher education research, because it became evident that it was these practices which reciprocally shaped the research environments. The final iteration of the study resulted in the inquiry question being framed

Why are current legitimization and reward frameworks for higher education research both inadequate and insufficient for quality appraisal purposes?

This inquiry question was grounded in one of the principal concerns that emerged during the second year of the study. This concern was that the generative metaphor<sup>28</sup> underpinning performance-based, quality appraisal frameworks for higher education research, was far too limited for quality appraisal of research practice. The generative metaphor was that of industrial production,<sup>29</sup> and the options for accountability were necessarily limited to performance indicators of *productivity*. Given the supply-side theory<sup>30</sup> which dominates higher education policy following implementation of the Dawkins initiatives, an industrial production

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<sup>28</sup> See Lakoff, G. & Johnson, M. (1980) op.cit., Ch.12 & Ch.13.

<sup>29</sup> House, E. R. (1986) 'How We Think about Evaluation', in House, E. R. (ed) *New Directions in Educational Evaluation*, The Falmer Press, London, p.34.

<sup>30</sup> Marginson, S. (1993) op. cit., p.123

metaphor for higher education research was the logical framework. However, the use of a generative metaphor predetermined the action options that were available, and the questions that might be asked concerning the quality of research practice. The rationale, therefore for framing the inquiry question in its final iteration, was recorded in the author's Project Journal as two propositions:

- a. An appraisal framework based on a production metaphor is theoretically and conceptually inconsistent with research as a transformational, self-renewing, self-sustaining process. This inconsistency places the purposes served by research-related activity in an adversarial relationship with system's level accountability and legitimation criteria which are located within the economic rationalist paradigm.
- b. What is required is a new framework based on a generative metaphor, such as human action systems,<sup>31</sup> that will enable the synergies between the two frameworks to be identified and utilised in the building of a relevant process for quality appraisal. Such a framework would provide for a synthesis and accommodation of the purposes now being served at the level of both research activity and system's accountability.

The following chapter explains how, and why an action theory framework<sup>32</sup> furnishes the necessary theoretical underpinnings for the developing the type of appraisal practices that meet the criteria listed above.

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<sup>31</sup> Checkland, P. & Scholes, J., (1990) *op. cit.*, pp.23 -27.

<sup>32</sup> Polkinghorne, D. (1983) *op. cit.*, Ch.5.

## CHAPTER 6

### AN INTRODUCTION TO ACTION THEORY AS A METATHEORETICAL FRAMEWORK FOR INQUIRY

Social action is the means by which those involved in research achieve sustainability, flexibility and renewal of research, as a sphere of social life. The choice of a theoretical framework for social analysis is guided, in this study, by the usefulness of the proposed metatheory for understanding a broad range of social action. Action theory<sup>1</sup> is the metatheoretical framework which underpins the present study. Action theory provides a powerful explanatory framework for building grounded theory. In the case of the present study, this is theory about effective action for research in the day-to-day activities of research practice, in the organisation and reward of research at the level of the institution and in coordination and legitimation of action at the broader levels of the economic and social/political systems. This chapter provides an introductory explanation of action theory in the form of hermeneutic<sup>2</sup> and critical hermeneutic<sup>3,4</sup> frameworks and more specifically, through the metatheoretical framework of Habermas', social philosophy.<sup>5,6</sup> In this and the following chapter, action theory is shown to provide the concepts necessary for facilitating understanding about the type of activities that constitute effective action.<sup>7</sup>

#### Mapping the Territory of an Action Theoretic Framework for Quality Appraisal

Action theories are founded on the proposition that human action involves 'intent' and is inherently social. The 'term *purposive* is used to define the intentional experience which

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<sup>1</sup> Polkinghorne, D. (1983) op. cit., Ch.5.

<sup>2</sup> Geertz, C., op. cit, p.133.

<sup>3</sup> Habermas, J. (1971a) op. cit. pp.197-203.

<sup>4</sup> McCarthy, T. (1978) op. cit., pp. 303 - 310.

<sup>5</sup> See Habermas, J. (1984) op. cit.

<sup>6</sup> See Habermas, J. (1987) op. cit.

<sup>7</sup> McTaggart, R. (1991) op. cit., p.79.

characterises human action.<sup>8</sup> The characteristic of intentional awareness consists of the experience of wanting something and believing that a particular movement [communication as well as bodily] will achieve what is wanted.’<sup>9</sup>

In his monograph, *Methodology for the Social Sciences*, Polkinghorne explains that;

[h]uman action concerns intended activity. As such it includes communication acts as well as bodily movements. Communication acts leave traces: literature, art, artifacts, and organizational and social systems. The subject matter of human science is the realm of human action and its traces.<sup>10</sup>

In their phenomenological studies of human action, Berger and Luckman propose that ‘[t]he world of everyday life is . . . a world that originates in . . . thoughts and actions, and is maintained as real by these.’<sup>11</sup> The knowledge-base generated in the course of the present study focuses on researchers’ interpretations of the meaning of their ‘everyday ‘ experience. This ‘experience’ is used as a resource for deepening understanding about the meaning and value of action for research and the interests that are served by appraisal practices in the current systems of legitimation and reward.

Habermas<sup>12</sup> explained that both the meaning and the validity of action are ‘internally connected and arise together in the process of interpretation’.<sup>13</sup> However, as Habermas cautions, ‘[o]nly to the extent that the interpreter grasps the *reasons* that allow the author’s utterances to appear as *rational* does he understand what the author could have

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<sup>8</sup> von Wright, G. H. (1971) *Explanation and Understanding*, Cornell University Press, Ithaca, N.Y., pp.59-60.

<sup>9</sup> Polkinghorne, D. (1983) op. cit. pp.171-72.

<sup>10</sup> Polkinghorne, D. (1983) *ibid.*, p.172.

<sup>11</sup> Berger, P.L. & Luckman, T. (1966), op. cit., p.33.

<sup>12</sup> Habermas, J. (1984) op. cit., p.xiv & Ch.3.

<sup>13</sup> Pusey, M. (1987) op. cit., p.63.

*meant . . .*'.<sup>14</sup> This fundamental proposition of action theory furnishes the rationale for the present study: that researchers' interpretations of the value of action for research, can provide a substantive database for critical reflective analysis of the efficacy of quality appraisal practices. It is only through in-depth understanding of the reasons *why* action for research is valued by researchers, that both the nature and the meaning of effective research practice can be made transparent for quality appraisal purposes.

The focus of the present study, therefore, is human action in research as a sphere of social life. With human action as the focus, the paradigm of choice is that of action theory.<sup>15</sup> Human action is a complex unity. For inquiry purposes, however, the present study separates analytically, the action for research practice into three different domains. These three domains of action are physical, conceptual and social action, and are derived from the categories traditionally employed in action researching methodologies.<sup>16</sup> The three domains of action are those of; activities in the form of social practices; language in the form of discourses; and the patterns of social relations that both shape and define a particular sphere of social life. Furthermore, the study draws directly on action theories as a source of language to describe, explain and justify the efficacy of quality appraisal practices for research.<sup>17</sup>

In an action theory paradigm, the validity of action is determined by its efficacy with regard to intended purposes.<sup>18</sup> This logic is central to the design of the fieldwork processes for the present study. The patterns of action that are valued by researchers at the level of practice, are those which are sustained by the choices individuals make in their day-to-day activities. At the same time, however, their patterns of action are also

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<sup>14</sup> Habermas, J. (1984) op. cit., p.132.

<sup>15</sup> Polkinghorne, D. (1983) op. cit., Ch.5.

<sup>16</sup> Kemmis, S. & McTaggart, R. (1988) op. cit., p.34.

<sup>17</sup> Habermas, J. (1987) op. cit., Ch. VI, 1,2 & pp.399-403.

<sup>18</sup> Habermas, J. (1984) op. cit., p.106.

shaped by the broader, historically located systems of social action such as the economy. From a phenomenological perspective, the patterns of individual and system-level action that make up everyday research practice, may be mapped or objectified as ‘structures of experience’.<sup>19</sup> In this sense, the everyday activities of researchers can be understood epistemologically<sup>20</sup> as human activity systems.<sup>21</sup> These are activity systems for generating and sharing meaningful action. Because of the nature of human action, both levels of activity systems are always in process - in the process of social evolution.

In the present study, collaborative analysis undertaken by participants, of effective action for research at both the local and system-levels, mirrors the hermeneutic inquiry activity described by Geertz.<sup>22</sup> Geertz proposed that ‘a continuous dialectical tacking between the most local of local detail and the most global of global structures in such a way as to bring both into view simultaneously’<sup>23</sup> is the way to achieve hermeneutic understanding. The structures to which Geertz refers, can be thought of as rationalised human activity systems that have been institutionalised in different organisational forms as the social and economic systems.<sup>24</sup>

### **The Importance of the Hermeneutic Dimension**

The meaning and value attributed to human action is the central theme explored in the hermeneutic and critical hermeneutic or interpretive traditions.<sup>25</sup> The identifying

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<sup>19</sup> Polkinghorne, D. (1983) op. cit, p.210

<sup>20</sup> Checkland, P. & Scholes, J. (1990) op. cit., p.23.

<sup>21</sup> Habermas, J. (1982), ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds) op. cit., p.268.

<sup>22</sup> Geertz, C. quoted in Bernstein, R. J. (1983) op. cit. p.133.

<sup>23</sup> Ibid.

<sup>24</sup> Habermas, J. (1987) op. cit., p.181.

<sup>25</sup> Bleicher, J. (1980) *Contemporary Hermeneutics: Hermeneutics as Method, Philosophy and Critique*, Routledge and Keegan Paul, London.



characteristic of hermeneutic approaches is the key notion of 'interpretation' in the form of human action for understanding. Hermeneutics is oriented primarily towards human *understanding* and the possibility of interpreting understanding itself. The philosopher, Bernstein, commenting on the writings of Gadamer, observed that '... to understand what it is to be human beings [in whatever sphere of social life], we must seek to understand understanding itself, in its rich full and complex dimensions.'<sup>26</sup> Hermeneutic inquiry has as its focus, the practical theory of everyday action and the meaning in that action. Gadamer, is one of the central figures in the development of hermeneutic thinking. He describes the process involved as 'the coming into being of meaning'. Gadamer explains that '... meaning is not self-contained-simply "there" to be discovered; meaning comes to realization in and through the "happening" of understanding.'<sup>27</sup> Hermeneutics is, therefore, both a theory and a philosophy 'of the interpretation of meaning'.<sup>28</sup> Bernstein describes how;

... hermeneutics developed as a reaction against the intellectual imperialism of the growth of positivism, inductivism, and the type of scientism that claimed that it is the natural sciences alone that provide the model and the standards for what is to count as genuine knowledge.<sup>29</sup>

According to Gadamer,<sup>30</sup> the meaning and value of action are always bound and shaped by the historical structures of knowledge that are used in the process of comprehension. Gadamer proposes that we are all bound in our understanding, by the 'legitimate' prejudices which define our 'horizon' of understanding. Gadamer indicates that it is the dialogical openness between interpreter and the experience that allows for 'the positive and productive possibility of understanding'.<sup>31</sup> In this sense, our prejudices are enabling

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<sup>26</sup> Bernstein, R.J. (1983) op. cit., p.113

<sup>27</sup> Ibid, p.126

<sup>28</sup> Bleicher, J. (1980) op. cit., p.1.

<sup>29</sup> Bernstein, R.J. (1983) op. cit.op. cit., p.112.

<sup>30</sup> Gadamer, H. G. (1975), op. cit, p.247.

<sup>31</sup> Bleicher, J. (1980) op. cit., pp.110-111.

biases rather than constraining barriers to enhanced understanding. The present study exploits the possibility of articulating and making explicit tacit *understandings* or personal prejudices. These *understandings* are used as a resource for mutual understanding about the type of action that is valued at the level of research practice. Mutual understanding is possible only through the a 'dialogue and conversation which presupposes mutual respect, recognition, and understanding'.<sup>32</sup> For this reason, the inquiry processes of the present study are iterative and responsive.<sup>33</sup> They are *iterative* because they are based on the hermeneutic dialectic form of inquiry<sup>34</sup> and *responsive* because the study is both shaped by and reciprocally shapes the emerging patterns of significance. These processes provide what Gadamer identifies as the conditions necessary for learning, where the principle of freedom from coercion is translated into action at the level of inquiry practice.<sup>35</sup>

While the work of Habermas and Gadamer have been used to build a theoretical framework for the present study, their theories have not been taken uncritically. The criteria for inclusion has been that of usefulness for explaining the forms of social life which are the subject of the present study. However, the debates which characterise the interpretive tradition still impinge on the use of these theories and practices in the study itself.

Pusey, commenting on Habermas' recognition of the value of hermeneutic interpretation as a weapon against empiricist assumptions emphasised, as mentioned in a previous chapter of the thesis, that 'meaning and validity *are internally connected and arise together*

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<sup>32</sup> Bernstein, R.J. (1983) op. cit., p.165.

<sup>33</sup> Stake, R.E. 'Program Evaluation, Particularly Responsive evaluation', in Madaus, G.F., Scriven, M. and Stufflebeam, D.L. (eds) (1983) *Evaluation Models: Viewpoints on Educational and Human Services Evaluation*, Kluwer-Nijhoff, Boston, pp.287-310.

<sup>34</sup> Guba, E. G. & Lincoln, Y.S. (1989) op .cit., pp.152-155.

<sup>35</sup> Gadamer, H.G. quoted in Bernstein, R.J., (1983) op. cit p.164.

*in the process of interpretation.*'<sup>36</sup> Gadamer proposed that *interpretation* is temporally and contextually located, and therefore, historically bound. Habermas argued in response to Gadamer's claim, that while the act of interpretation was historically-located, it was also subject to critical reflection. These differences in framing *interpretation* as action, can be explained by the respective philosophical levels of focus adopted as conceptual reference points. While Gadamer approached hermeneutics from the conceptual level of philosophy, Habermas opted for the level of critical perspective based on a therapeutic critique afforded by Freud's psychoanalysis<sup>37</sup> which is oriented with internalist, individual action.

Debates such as these are common to the domain of hermeneutic philosophies and methodologies.<sup>38</sup> The debate between Gadamer and Habermas<sup>39</sup> underscores the value of the hermeneutic method for enhancing understanding, but also the need for reflective inquiry with a critical attitude, when 'action itself becomes the object of inquiry'.<sup>40</sup> A critical attitude is called for because thinking and doing in action, are essentially an uncritical and integrated whole. Habermas argues that the 'dialogue' to which Gadamer refers, cannot without a critical consciousness, be a dialogue, because it is itself constituted through its own historicity. From the perspective of a critical social theory, Habermas proposes that social theory 'must be critical - it must reconstruct the fundamental norms which guide theory'.<sup>41</sup> Habermas proposes that 'consensus' regarding action and its meaning, can be the result of systematically distorted self-understanding. This is because there are 'dominant interests active behind the

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<sup>36</sup> Pusey, M. (1987) op. cit., p.63.

<sup>37</sup> Bleicher, J. (1980) op. cit., pp.201-203.

<sup>38</sup> See Bernstein, R.J. (1983) op. cit.

<sup>39</sup> Bleicher, J. (1986) op. cit., pp.153-164.

<sup>40</sup> Smyth, W.J. (1986) op. cit., p.13.

<sup>41</sup> Roderick, R. (1986) *Habermas and The Foundations of Critical Theory*, St. Martin's Press, New York, p.11.

engineering of public opinion.’<sup>42</sup> Although Gadamer agrees with this proposition, he questions if it is legitimate to accept that dialectical hermeneutics can be emancipatory, at the level of society, when it is modelled on psychoanalysis, which is itself conceptualised at the level of the individual. This thesis argues that it is the process of dialectical inquiry itself that resolves, at the level of practical action, the two apparently antithetical philosophical positions described in the debate between Gadamer and Habermas.

Guba and Lincoln<sup>43</sup> described this inquiry approach as ‘the hermeneutic dialectic circle’. This approach is identified as a hermeneutic-dialectic process because the inquiry involves a continual dialectical tacking, between the specifics of the respective participant’s constructions, and the overall inquiry ‘reality’ which is being constructed through interactive processes.<sup>44</sup> Grounded theory researchers such as Strauss and Corbin<sup>45</sup> conceptualised the territory of hermeneutic enquiry in terms of a *conditional matrix*.<sup>46</sup> A conditional matrix consisting of multiple concentric circles is an analytic aid for considering the action/interaction that is the focus of the study across the range of related, mutually-shaping conditions and consequences. In grounded theory research, the hermeneutic processes are expressed as a *transactional system*. A transactional system;

... is made up of interactive and interrelated *levels of conditions*. These range in scope from the broadest, or most general features of the world at large, to the more specific-those closest to the phenomenon under investigation.<sup>47</sup>

In order to better understand the meaning and value of everyday action for research, this study brings into question the assumptions and values underpinning both research

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<sup>42</sup> Bleicher, J. (1980) op. cit., pp.158-161.

<sup>43</sup> Guba, E. G. & Lincoln, Y.S. (1989) op. cit. p.174.

<sup>44</sup> Ibid., pp.152-155.

<sup>45</sup> Strauss, A. & Corbin, J. (1990) op. cit., Ch.10.

<sup>46</sup> Ibid., p.163.

<sup>47</sup> Ibid., p.160.

activities and system level quality appraisal practices for research. The context in which the value of everyday activity is questioned, is that of the four Phase process that constitutes the fieldwork for the reflective inquiry of the present study. The focus for Phase 1 of the study is the social space of the respective participant-researchers (henceforth known as ‘participants’) taking part in the inquiry. Social space, following on the work of Habermas,<sup>48</sup> is understood as the domains of action that are created and sustained by the individual and cultural action of those who inhabit a particular sphere of social life. In Phases 1 and 2, the reflective activities of author and participants serve to build a substantive database of descriptive statements about effective and ineffective action for research. Phases 3 and 4 involve the author and participants in activities that serve to critically analyse the substantive database generated in the first two phases, as a resource for decision-making. Furthermore, Phases 3 and 4 focus on collaborative analyses of firstly, the value of action for research at the level of practice, and secondly, the value of action undertaken in the present study, for quality appraisal of research. Phases 3 and 4, in effect represent a second level of reflective action<sup>49</sup> which is critical reflection. The critical attitude is a central theme in the work of Habermas who seeks to take the hermeneutic understanding of social action generated in reflective practice, to an emancipatory level.<sup>50</sup> By this, Habermas means that reflective practice is employed as a process for identifying, explaining, and hopefully removing the constraints imposed by previously unquestioned ways of framing and valuing social action.

Smyth,<sup>51</sup> writing on reflective practice for the Deakin University’s, School of Education Open Campus Programme, describes critical reflective practice in the following way. Critical reflective practice is used ‘. . . as a form of inquiry . . . [It] is . . . a way in which practitioners . . . problematise or bring into question the taken-for-grantedness of what

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<sup>48</sup> Habermas, J. (1987) op. cit., pp.136-142.

<sup>49</sup> Smyth, W.J. (1986) op. cit., p.18.

<sup>50</sup> Habermas, J. (1971a) op. cit., pp.197-203.

<sup>51</sup> Smyth, W.J. (1986) op. cit., p.36.

they do.’<sup>52</sup> In the present study, critical reflective practice is the mode by which understanding about the nature of effective action for research is generated.

### **Types of Reflection and Purposes Served in Evaluative Activity**

The different types of reflection that are possible, according to Habermas, are related to the types of interests that may be served, so reflection can be either technical, practical or critical in its orientation.<sup>53</sup> For the purposes of the present study, an action typology of technical, practical and emancipatory interests proposed by Habermas<sup>54</sup> provides an action-oriented framework for judging the efficacy of legitimation and reward practices for research. The purposes that may be served by action include those that are oriented towards either:

- *Technical interests*, where evaluative action serves to exert control over the physical world of research activity;
- *Practical interests* where evaluative action serves to enhance understanding and guide practical judgements about the quality of research practices; and
- *Emancipatory interests* in which evaluative action serves to articulate and eliminate conditions that constrain or frustrate self-understanding and effective action in research practice.

Building on the action typology provided by Habermas, Smyth<sup>55</sup> proposes a typology of reflective practice. He explains how *technical reflection*, with validity claims to economy, efficiency and effectiveness, in relation to the physical world, is the application of existing knowledge to the attainment of given ends. The ends themselves are taken as essentially unproblematic. It is these technical interests that are currently being served by

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<sup>52</sup> Ibid., p.5

<sup>53</sup> Habermas, J. G. (1971a) op. cit., pp.196-99.

<sup>54</sup> Ibid., p.198.

<sup>55</sup> Smyth, W.J. (1986) op. cit., pp.18-19.

the use of performance indicators in quality appraisal of higher education research. *Practical reflection* is concerned with the moral, ethical and value considerations underpinning action, with validity claims to moral defensibility and the worth of goals. Practical reflection serves understanding which informs and guides practical judgment and therefore, everyday action. Habermas proposes that in the context of practical reflection, agreement about the value of action is based on 'the intersubjective recognition of criticisable validity claims - however merely implicit this may be.'<sup>56</sup> Practical reflection is hermeneutic in nature and enables self-understanding and clarification of the 'conditions of meaningful communication' and valid action. Practical reflection is employed collaboratively, in this study, to identify the processes and social relations that facilitate or constrain research as a form of social life. However, critical reflection plays the key role in Phases 3 and 4, the second level of the present inquiry.

Critical reflective action on the part of participants involved in Phases 3 and 4 of the inquiry, provided the necessary and complementary mode of analysis for the interpretive or hermeneutic understanding developed in Phases 1 and 2. It was the potential for *critical reflection* that was exploited in Phases 3 and 4 of the iterative dialogue processes. Critical reflection in these circumstances provided for articulation of the value of current practices for effective action. By placing an explicit value on particular activities with respect to their effectiveness for research practice,<sup>57</sup> participants in the study were supported in identifying, understanding and eliminating conditions that constrained their research practice.<sup>58</sup> In this sense, there was also the possibility that researchers could, with the knowledge they had gained, identify ways of freeing themselves from the distortive effects of institutionalised legitimation and reward systems.

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<sup>56</sup> Habermas, J. (1982), 'A Reply to My Critics' in Thompson, J.B. and Held, D. (eds) op. cit., p.264.

<sup>57</sup> Curtis, S. (1993a) 'Higher Education in Australia: When Organisations For Learning Need To Become Learning Organisations', Paper presented to the Fourth International Conference, Australasian Association for Institutional Research, Darling Harbour, Sydney, September 29-October 1. pp. 10-11.

<sup>58</sup> Smyth, W.J. (1986) op. cit., pp.18-19.

Polkinghorne,<sup>59</sup> observed that institutionalised systems of legitimation and reward tend towards empirical measures of quality that can be abstracted and related to one another in a mathematical way.

However, this [abstraction] requires an abstraction of the human realm in respect to formal properties, and necessarily implies that an important part of the meaning of human phenomena must be left out of consideration.<sup>60</sup>

The current performance-orientated legitimation and reward systems for higher education research, rely heavily on abstract mathematical representations of quality research practice, and as such, fail to account for the necessary ‘human’ dimensions of research practice. It is the hermeneutic and critical hermeneutic traditions together, therefore, that in the present study, provide the meta-theoretical background for generating information about the human dimensions of effective research practice. In this study, interpretive, hermeneutic inquiry processes are used for the development of descriptions and judgements about the type of action that is valued by researchers. In this context, shared understanding of facilitative action for research, provides the *human dimension* of intersubjective agreement that is absent from current legitimation and reward practices for higher education research.

Shared understanding, however, is something that can only be achieved through a particular type of communication. Habermas emphasises that the ‘negotiation of definitions of the situation is an essential element of the interpretive accomplishments required for shared understanding.’<sup>61</sup> Negotiation of shared situation definitions, in the form of iterative dialogue processes,<sup>62</sup> is the essential methodological core of the present inquiry. Iterative dialogue processes, the basis of intersubjective agreement, are used in this inquiry to develop a shared understanding of the nature of effective action for research.

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<sup>59</sup> Polkinghorne, D. (1983) op. cit., p.203.

<sup>60</sup> Ibid.

<sup>61</sup> Habermas, J. (1984) op. cit., p. 286.

<sup>62</sup> Bernstein, R.J. (1983) op. cit., pp.128-129.



In his explanation of the purposes served by human action, Habermas proposes that ‘The distinction between orientation to success [performance] and orientation to reaching understanding is decisive for the construction of [the] typology of action’.<sup>63</sup> This distinction is also central in the present study because it provides the necessary reference points for critical analysis of the purposes served by current legitimation and reward systems. In order to understand the purposes served by action, however, it is useful to refer, once again, to the action typology of Habermas, but this time, with a focus on the action orientations themselves.

### **A Framework for Understanding the Reasons Behind the Action**

Habermas explains<sup>64</sup> that two types of action are oriented towards success and that these are both performance-oriented and purposive-rational. By purposive-rational, Habermas means the type of action which is directed towards controlling the physical environment and/or the actions of others, in order to achieve defined ends. The first type of action described by Habermas is that labelled, *instrumental*. Instrumental action is of the non-social kind and is defined as action that follows technical rules. The criteria for appraisal of technical action is the *efficiency* of goal-oriented intervention in the physical world. *Strategic* action, on the other hand *is* social action and follows the rules of rational choice. The criteria for appraisal of successful strategic action is the *efficacy* of action taken in influencing the decisions of others. Both instrumental and strategic action, on the part of government and institutional administrators, with regard to legitimation and reward of research, is evident in current appraisal practices. This type of action, demonstrated in previous chapters, can be seen in:

- The instrumental action of government research policy imperatives based on a supply-side theory;
- The strategic action of government in coupling untied infrastructure funding to success in attracting CCGI income for research pursuits;

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<sup>63</sup> Habermas, J. (1982) ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds) op. cit., p.263.

<sup>64</sup> Habermas, J. (1984) op. cit., p.285-286.

- The strategic action of institutional administrators in using quality audits to influence movement of academic communities towards a more managerialist orientation; and
- The instrumental action of government in using output-oriented, performance-based criteria as *the* measures of research quality for resource allocation purposes.

There is, however, a third type of action that Habermas has labelled *communicative*. Communicative action serves a quite different purpose from instrurumental and strategic action. Communicative action is oriented not to control, as are the other two, but to understanding and practical action. Chart 6.1 presents Habermas’ action typology in diagrammatic form.

**Chart 6.1 : Types of Action**

Action Situation \ Action Orientation	Oriented to success	Oriented to Reaching Understanding
Nonsocial	Instrumental action	-----
Social	Strategic action	Communicative action

Ref: Habermas, J. , The Theory of Communicative Action Volume 1: Reason and The Rationalization of Society translated by Thomas McCarthy, Beacon Press, 1984, p.285.

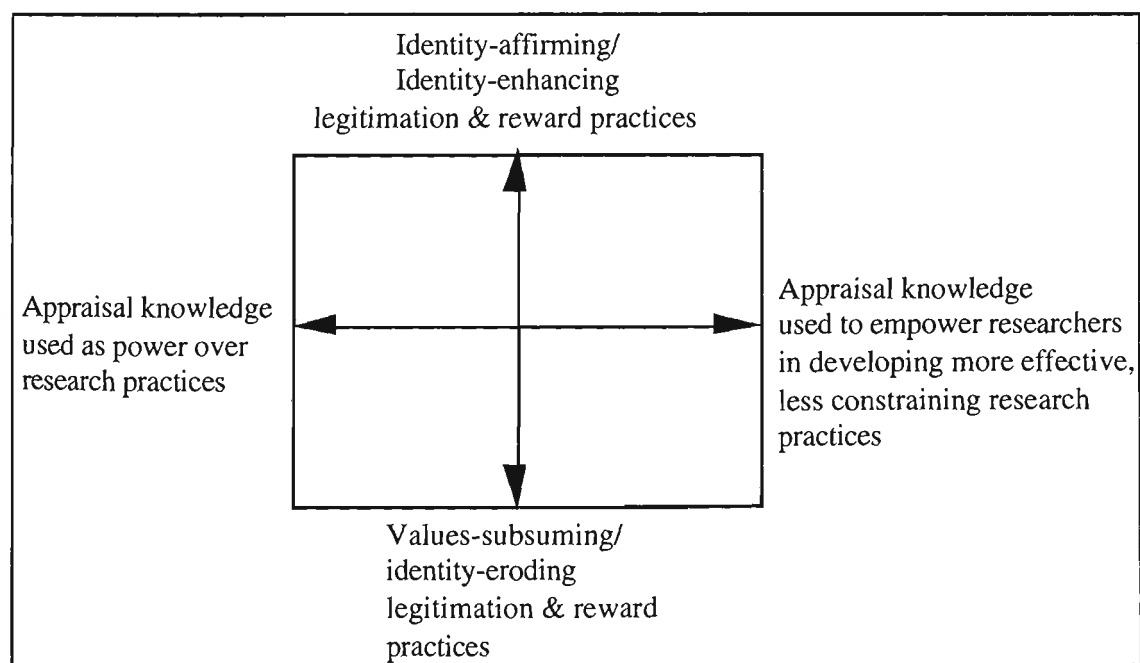
Oriented as it is towards understanding, communicative action involves the sharing of power among participants. This type of action occurs according to Habermas;

. . . when social interactions are co-ordinated not through the egocentric calculations of the success of every individual, but through co-operative achievements of understanding among participants. In communicative action, participants are not oriented primarily to their own success but to the realisation of an agreement which is the condition under which all participants in the interaction may pursue their own plans.<sup>65</sup>

<sup>65</sup> Habermas, J. (1982) ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds) op. cit., p.264.

Based on the theoretical framework provided by Habermas, the present study examines the following working hypotheses. The first is, that in the context of human activity systems, legitimation and reward practices could serve communicative action purposes, by enhancing and affirming the values and identities of those involved in research. The second hypothesis is that if legitimation and reward systems were oriented towards technical and strategic interests which serve to direct and control research activity, the risk is that academic identity, based on shared understanding about the value of action for research, could be subsumed by utility-oriented, performance-based standards. Alternatively, if legitimation and reward systems were oriented towards practical and emancipatory interests congruent with research practice, then it is likely that the relations of knowledge based on shared understanding about effective research practice would be enhanced. These working hypotheses are presented diagrammatically by the author in the Figure 6.1.

**Figure 6:1** *The Impact of Legitimation and Reward Practices on The Relations of Knowledge*



The present study seeks to balance the strategic and instrumental action inherent in current legitimization and reward practices by examining the possibility that metalearning,<sup>66</sup> could provide an alternative information resource for appraisal purposes. Metalearning is the learning about action that best facilitates effective research practice. It is the invisible 'product' of higher education research. Metalearning, in this sense, constitutes the type of learning which enables researchers to continually transform their practice in ways that empower them to generate and sustain facilitative research environments. Metalearning, therefore, provides an essential dynamic in the relations of knowledge production. By objectifying metalearning, the present study hypothesises that a resource that is grounded in effective action for research can be generated for quality appraisal purposes. Smyth proposes that;

. . . knowledge acquired in this way is not . . . static and dependent upon legitimization by outside 'experts'. There is a quality to it that acknowledges a certain willingness to take risks and to confront circumstances of uncertainty in an enterprising way . . . through monitoring what they do themselves [researchers] . . . have a way of knowing that is inherent in intelligent action.'<sup>67</sup>

### **Locating the Inquiry Framework in Broader Research Programmes**

The broader research program, in which critical reflective practice is located, is that of critical hermeneutics and derivatively critical social science.<sup>68,69</sup> The critical hermeneutic inquiry paradigm is one which seeks to explain social action and the way in which society progresses or fails to progress, in terms of social action. Habermas proposes,<sup>70</sup> that the

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<sup>66</sup> Bawden, R. (1990) 'Towards Action Researching Systems', in Zuber-Skerritt, O. (ed) op. cit., p.34.

<sup>67</sup> Smyth, J. (1986) op. cit., pp.18-19.

<sup>68</sup> Bleicher, J. (1980) op. cit., Ch.8.

<sup>69</sup> Zuber-Skerritt, O. (ed) (1990) op. cit pp.124-125.

<sup>70</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds) op. cit., p.228.

maturation of productive processes through learning, is itself the process which signifies the increasing rationalisation of society. Learning takes place in the form of enhanced capacity to 'objectivate' what we think and in enhanced moral, practical insight. He measures progress in terms of more sophisticated cognitive structures for understanding our 'understanding in action' rather than in terms of 'content'. It is in this sense that the enhancement of norms, strategies, and assumptions embedded in practice, constitutes the process of learning that is *metalearning*. Metalearning is central to the current study because it is metalearning or enhanced understanding about the nature of effective human action which underpins 'progress' towards more emancipatory and equitable patterns of social action. It is through 'progress' of this nature that the efficacy of appraisal practices may be assured and towards which the central tasks of theory building and practical action in the present study are directed. The following chapter explains how and in what ways such tasks may be constrained in the first instance by patterns of institutionalised action and in the second, by the potential limitations of the Habermasian framework for practical inquiry purposes.

## CHAPTER 7

### IMPLICATIONS OF THE ACTION THEORY FRAMEWORK FOR THIS INQUIRY

This chapter explains the qualitative differences between what Habermas terms the ‘lifeworld’ and the ‘system’, and what the implications of these differences might mean for the present inquiry. Specifically, this chapter examines the concepts of Habermas’ social theory, used in this study as a framework for understanding the efficacy of legitimization and reward systems for higher education research. The potential limitations of the Habermasian framework for practical inquiry purposes are addressed, as are options for reframing those aspects of the Habermasian platform that are constraining for the purposes of the present study.

#### **The Meaning and Value of Action in Two Different Spheres of Values**

A central concern for the present study is the insufficiency of current quality appraisal frameworks for higher education research. In order to explain the nature of this insufficiency it is necessary first to understand why it might be that current legitimization and reward systems fail to acknowledge metalearning as an important component of research practice.

Habermas<sup>1</sup> has proposed that in society, as it has evolved today, the process of rationalisation of human action has given rise to two distinctly different spheres of values and understandings which determine the meaning and therefore the value of action. The first is that of the ‘lifeworld’ and the second is that of the social ‘system’. Habermas introduces the concept of lifeworld ‘. . . as the correlate of processes of reaching understanding.’ Every actual consensus is achieved against this ‘uniquely pre-reflective

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<sup>1</sup> Habermas, J. (1987) *op. cit.*, p.118.

form of background relations'<sup>2</sup> which Habermas identifies as the lifeworld. The lifeworld provides;

... a resource of meaning and situation definitions that are drawn upon for social reproduction. ... the lifeworld is crucial for the reproduction of culture, society and personality in so far as it is the carrier of personal, social and cultural tradition.<sup>3</sup>

The lifeworld is contrasted with that of the social system which is expressed in the form of subsystems such as the economy and the state administration. Social systems are formally organised domains of action based on the *steering media* of money and power.<sup>4</sup> With increasing complexity and density, networks of social interactions have to be coordinated in ways that do not rely on mutual understanding through direct communication. Money and power function as coordinating mechanisms that reduce the expenditure of communication and the risk of disagreement in complex networks of social interaction. If these mechanisms simply serve to *condense* the meaning in action, the integrity of communication for coordinating action is retained. However, a problem arises if such mechanisms replace the mutual understandings which coordinate social action, with values and meanings that pertain primarily to the needs of the system.<sup>5</sup>

Steering media which serve the needs of the system have emerged with the rationalisation of social action and are specifically related to goal-oriented or purposive rational action. Purposive rational action which serves primarily system integration, is *instrumental* in that it is driven by technical rules governing efficient intervention in complex circumstances and events. The supply-side theory of action driving the government's current higher education policy orientations, is an example of instrumental action at the

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<sup>2</sup> Habermas, J. (1984) op. cit., p.70.

<sup>3</sup> Roderick, R. (1986) op. cit., p.119-120.

<sup>4</sup> Habermas, J. (1987) op. cit., p.181.

<sup>5</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds), op. cit., p.281.

level of the system. The other type of purposive-rational action is strategic action which is oriented to influencing the decisions of others. Strategic action is considered successful in terms of its efficacy for influencing action. Research funding policies and in particular, infrastructure funding arrangements, have strongly influenced the attitude of higher education institutional managers and researchers themselves, towards the type of criteria adopted for legitimation and reward of research. Their responses have been shaped, in large part, by the tension between the demands of system for accountability and the imperatives of traditional knowledge domain structures.

In the current legitimation and reward systems for higher education research, key stakeholders are privileging the values sphere of the system. As a consequence of this situation of privilege, the relations of the market are placing at risk the relations of knowledge, which serve to facilitate researching capability development and hence sustainability and renewal of research as a sphere of social life.

### **Purposive-Rational Action and the Seductive Power of the System's Imperatives**

It is important for the purposes of this study, to appreciate how it is possible that purposive-rational systems have come to subsume, or in some cases replace, communicatively achieved consensus about the meaning and value of action. The social system, comprised of the subsystems of state and economy, has evolved through a process of rationalisation of the *lifeworld*. Rationalisation has occurred with the growth and increasing dominance of formalised systems of action. Habermas<sup>6</sup> proposes that it is the one-sided rationalisation of the lifeworld in the form of purposive-rational action that has privileged the validity claims related to *instrumental* and *strategic* action. Alternatively, recognition of validity claims in the context of *communicative* action

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<sup>6</sup> Ibid., p.269.



requires that agreement be reached simultaneously at three different levels.<sup>7</sup> The first of these levels involves the normative ‘rightness’ of the claim for the context of legitimate social orders. The second level involves the ‘truth’ of the proposition in the context of existing states of affairs. Finally, agreement involves recognition of the ‘truthfulness or sincerity’ of the claim in terms of the speaker’s own subjective world experience.

With the development of the subsystems of government or bureaucratic governance and the economy, it is claims as to the ‘objective truth’ of propositional statements that have come to dominate legitimation and reward systems. This bias in validity claims has meant that abstract, performance-oriented criteria that are useful at the more complex levels of social action, have come to dominate legitimation and reward systems. Performance criteria that are easily abstracted for comparative purposes, provide an attractive quality appraisal option that is free of the constraints entailed in communicatively secured agreements about the meaning and value of action.

Roderick, interpreting the social philosophy of Habermas, observed that;

[t]he capitalist economy and the modern administrative state [have] privileged the value sphere of science for its functions of power and control, and thus . . . one-sidedly imposed the hegemony of scientific rationality over the other value spheres. This [has] obscured the scope, role and goal of the more comprehensive concept of communicative rationality<sup>8</sup> [for consensual action].

Communicative rationality, based on agreement in the moral-practical realm,<sup>9</sup> has occurred alongside, but not commensurate with, progress in scientific rationality. The impact of this one-sided development of legitimation and reward systems, particularly in

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<sup>7</sup> Habermas, J. (1990) op. cit., p. 58.

<sup>8</sup> Roderick, R. (1986) op. cit., p. 133.

<sup>9</sup> Ibid., p.101.

an era of economic constraint in public funding, has been the increased importance of measures that can be abstracted and easily quantified.

Because of infrastructure funding arrangements for higher education research and the certainty of empirical measures; the dollar value of research grants, research publication counts and citation counts, have assumed a much greater importance in appraisal practices. Although quantitative indicators represent only limited aspects of research practice, they are taken as 'empirical measures' of research quality for resource allocation purposes. With current research in train,<sup>10</sup> this trajectory is likely to be greatly strengthened.

The implications of an increasing dominance of purposive-rational, instrumental action in appraisal practices, is that sustainability and renewal of research as a sphere of social life may be threatened. Habermas made a similar point with considerable force.

Inasmuch as they do not merely simplify linguistic communication, but *replace* it with symbolic generalisation of rewards and punishments, the lifeworld contexts in which processes of reaching understanding are always embedded are devalued in favour of media-steered interactions; the lifeworld is no longer needed for the coordination of action<sup>11</sup>

With the peer review system, communicatively shared convictions about quality research and the recognition that attaches to the outcomes of peer review, *can* function as a source of legitimate power. In this system, communicative practice can generate power that is acknowledged as 'power' without coercion, because it is oriented primarily to reproduction of lifeworld structures which sustain the integrity of inquiry practices. However, the increasing institutionalisation of the peer review system, with current

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<sup>10</sup> Murphy, P. (1995b) *op. cit.*

<sup>11</sup> Habermas, J. (1987) *op. cit.*, p.183.

research funding allocation mechanisms, serves to distort the purposes served by peer review practices. Action that was previously oriented to validity claims about research excellence is instead, increasingly oriented to the imperatives of government, the economy and resource allocation.<sup>12</sup> With this transformation of the contexts of peer review, there is the risk that the shortcomings of the system of review itself that serve to undermine the relations of knowledge, may well be amplified. Over, when writing for the Australian Universities Review Journal noted that;

[a]lthough most respondents favoured peer review as a process, many expressed concern at the quality of the reviews their application had received, the extent to which assessors chosen by the ARC seemed to lack expert knowledge, and inconsistency in the evaluations offered by different assessors.<sup>13</sup>

Over concluded the article by stating that;

[a]lthough ARC panel members who decide which applications . . . will be funded have access to peer review, the extent to which funding by the ARC reflects peer review is uncertain.<sup>14</sup>

In a highly competitive environment with limited financial resources, the shortcomings of peer review practices may be accentuated because of the influence of system imperatives on decision-making processes. Such shortcomings include those behaviours that align with market values, but which, in the academic context, serve self-promotion of the individual and power over resources. Becher has reviewed such tendencies and observes that they include; the tendency for peers to want to 'protect' their own territory and standing against rival claims; disagreement among designated 'experts'; the role of

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<sup>12</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds) op. cit., p.269.

<sup>13</sup> Over, R. (1994) 'Use of Peer Review by the Australian Research Council', *The Australian Universities' Review*, vol.37, no.1, p.32.

<sup>14</sup> Ibid., p.35.

chance; the low levels of consensus at the leading edge of research; the variation in types of validity claims across different fields of research and the possibility of political or strategic action entering into judgments.<sup>15</sup> If legitimization and reward systems exacerbate rather than limit the problems inherent in peer review practices, the processes that ensure social progress in research as a sphere of social life could well be undermined. Examples such as the following are testimony to the fact that in the current circumstances, the costs to social integration and academic identity are exceedingly high.

Power resides in the membership of salary and promotion committees: people suddenly realise that they are being judged by their seniors.<sup>16</sup>

. . . in the more highly specialized areas, the scope for informed and impartial judgment is limited . . . .<sup>17</sup>

Royal Society and Australian Academy fellow professor X is facing internal charges that he impeded the research of other members of the university . . . . The charges centre around the removal of experimental compounds critical to research into ageing at the height of an inter-departmental feud at [University] late last year . . . . The incident followed Professor X's removal as [Dept] head after a scathing review of the department's management in June last year.<sup>18</sup>

The key point to be made in relation to these instances of the high cost of current legitimization and reward practices, is that system-level values are being employed inappropriately for appraisal activities at the level of research practice. This confusion of different values spheres can be explained and critically examined using the 'three worlds' framework of social interaction developed by Habermas.<sup>19</sup>

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<sup>15</sup> Becher, T. (1989) op. cit., pp.61-64.

<sup>16</sup> Ibid., p.59.

<sup>17</sup> Ibid., p. 62.

<sup>18</sup> Healy, G. (1995) 'Monash scientist fights misconduct claim' in *The Australian Higher Education Supplement*, 7 June, p.23.

<sup>19</sup> Habermas, J. (1984) op. cit., pp.xiv-xv.

## Locating Validity Claims in their Respective 'Worlds' of Human Experience

Habermas proposed that judgements concerning the meaning and value in action are inherently connected to the [world or] conditions under which there can be shared understanding about claims to the validity of the action.<sup>20</sup> The concepts of the three worlds, objective, social and subjective;

. . . serve . . . as the commonly supposed system of coordinates in which the situation contexts can be ordered in such a way that agreement will be reached about what the participants may treat as fact, or as a valid norm, or as a subjective experience.<sup>21</sup>

By separating analytically the three dimensions of action, however, Habermas did reveal the weaknesses in his earlier synthesis of linguistic theory. Pusey observed<sup>22</sup> that not only did Habermas fail to explain why communicative action ought to be central to his theory of social action, he also failed to provide an adequate account of meaning or the distinction between semantic and pragmatic levels of communicative action. These weaknesses in Habermas' theory were resolved by reframing his social philosophy in terms of action and its purposes rather than the pragmatic functions of language.<sup>23</sup> Roderick, in his monograph on Habermas, observed that by framing communicative action in terms of the *reason* embodied in speech and action, Habermas was able to demonstrate much more adequately, that rationality was problematic at the level of action.

Pusey<sup>24</sup> developed a diagrammatic model of Habermas' 'three worlds' framework, reframed in terms of the structure of speech communication.

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<sup>20</sup> Ibid.

<sup>21</sup> Ibid. p.70.

<sup>22</sup> Roderick, R. (1986) op. cit., pp.98-105.

<sup>23</sup> Ibid, pp.108-109.

<sup>24</sup> Pusey, M. (1987) op. cit., p.79.

**Chart 7.1 :** *Habermas’ ‘three worlds’ framework for communicating validity claims*

Mode of communication	Cognitive	Interactive	Expressive
Type of Speech Actions	Constantives	Regulatives	Avowals
Domains of reality	‘The’ world of external nature	‘Our’ world of society	‘My’ world of internal nature
Basic Attitude	Ojectivating	Norm Conformative	Expressive
General functions of speech	Representation of facts	Establishment of legitimate interpersonal relations	Disclosures of speaker’s subjectivity
Validity claim	Truth	(Normative ) Rightness	Truthfulness (sincerity)

In the context of the three dimensions of communicative action, validity claims about the merit and worth of action ‘are open to criticism and evaluation’ and can be ‘defended and rationally grounded’.<sup>25</sup> Consensus about the meaning and value of action in these three dimensions of action is possible through the reflective practice of rationalisation. Rationalisation is possible in the form of either purposive-rationality<sup>26</sup> which serves system integration, or communicative rationality<sup>27</sup> which serves social integration. Communicative rationality, for Habermas, is that which is directed towards enhanced understanding.

In the the present study, it is communicative rationality which is identified with progress in the relations of knowledge. Progress in the social relations of knowledge necessarily involves more effective pursuit of individual goals on the basis of shared situation definitions. *Negotiation* of situation definitions is central to communicative action.

<sup>25</sup> Roderick, R. (1986) op. cit., pp.113-114.

<sup>26</sup> Habermas, J. (1984) op. cit., pp.102-103.

<sup>27</sup> Ibid., pp.106, 119.

Negotiation of this nature requires that those participating in the dialogue have equal status. If dialogue participants have equal status then the dialogue will be symmetrical because it involves reciprocal action orientations. Such action orientations are directed towards understanding rather than towards instrumental, or strategic<sup>28</sup> action, which serves to control others.

In the first two dimensions of communicative action, that of the knowing subject and the external world and that of the subject interacting socially with others, it can be assumed that consensus about the meaning and value of action is possible through a type of argumentation called discourse. That is to say, consensus about the meaning and value of action is assumed possible by means of grounds or reasons. The third and final relationship, however, between the subjectivity of the individual and the subjectivity of others, is qualitatively different. Validity claims in this dimension of experience cannot be addressed through the argumentation of discourse, because ultimate agreement cannot be assumed.<sup>29</sup>

It is agreement about the meaning and value of action in this third dimension of communicative action, however, which is required if quality appraisal practices are to sustain the lifeworld structures that underpin the relations of knowledge. By their very nature, quality appraisal practices are grounded in communicative rationality. Communicative rationality is based on the moral and ethical cognitive reference systems,<sup>30</sup> or lifeworld values, of research as a sphere of social life. This grounding is essential because it is these reference systems which are reproduced and renewed in order to sustain research as a sphere of social life. The dimensions of action encompassed by lifeworld structures determine the meaning and value of action for research. The present study works towards quality appraisal practices that are grounded in the meaning and value of action at the level of everyday research practice. In other words, policy and

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<sup>28</sup> Ibid., pp. 285-286.

<sup>29</sup> Roderick, R. (1986) op. cit., pp.113-115.

<sup>30</sup> Habermas, J. (1987) op. cit., p.136.

systems' level theories about what counts as valid evidence for legitimation and reward of research are compared with the subjective experience of researchers engaged in the everyday activities of research practice.

Using the three dimensions of communicative action framework, systems' level theories of action are understood in terms of the objective and the social or normative domains of action. Everyday practical activity for research or theories-in-use,<sup>31</sup> are interpreted as the subjective experience of researchers in their daily practice. Their everyday experiences serve as a resource for judgments concerning the efficacy of appraisal practices according to their understanding of:

- What counts as valid evidence of quality research practice;
- What is accepted as legitimate orders of social relations for research; and
- The type of legitimation and reward systems which do actually serve to sustain and enhance researching capabilities and academic identity.

The present study proposes that the valorisation of research excellence has transformed symbols of research excellence into symbols of market success. Because of this transformation, the current legitimation and reward systems of higher education research actively undermine the relations of knowledge. The relations of knowledge are those that serve to sustain and to reproduce the lifeworld structures of knowledge-generating communities. Habermas, proposed that;

[t]he transfer of action coordination from language over to steering media means an uncoupling of interaction from lifeworld contexts. Media such as money and power attach to empirical ties; they encode a purposive-rational attitude toward calculable amounts of value and make it possible to exert generalised, strategic influence on the decisions of other participants while *bypassing* processes of consensus-oriented communication.<sup>32</sup>

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<sup>31</sup> Agyris, C., Putnam, Robert, & McLain Smith, D. (1985) op. cit., p.85.

<sup>32</sup> Habermas, J. (1987) op. cit., p.183.



Habermas also proposed that the dominant cognitive-instrumental<sup>33</sup> approach to rationality is proper, but is only partial.<sup>34</sup> The problem is this. While a cognitive-instrumental approach to quality appraisal gives the appearance of certainty, it fails to account for the reproduction of the socio-cultural lifeworld in which performance of any description is necessarily anchored. His proposal is that communicative rationality has the potential to overcome the current one-sided focus on cognitive-instrumental rationality that characterises the late capitalist era.<sup>35</sup>

It is this proposition, that communicative rationality has the potential to overcome the bias towards the system's value sphere, that motivates the present study. This study works towards the development of a framework for valuing research which both complements the current purposive-rational action criteria for quality research and sustains the integrity of moral-practical action at the level of the research space. The iterative dialogue processes of the present study are built on communicative rationality as a foundation for establishing validity claims about action that facilitates research. When such claims are compared with the cognitive-instrumental or output-oriented, performance-based standards of current legitimation and reward structures, they serve to explain what is missing from current legitimation and reward systems in higher education. They also serve to illustrate why researchers may be experiencing legitimation crises.

### **The Nature of Crises Situations in the Relations of Knowledge**

Legitimation crises can occur in terms of disturbances to the reproduction processes of the lifeworld structures - culture, society and personality or identity. The structural

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<sup>33</sup> Habermas, J. (1984) op.cit., p.87. The cognitive-instrumental approach is 'cognitive' in the sense that the actor[s] can form beliefs about existing states of affairs and represent these 'as propositional contents of sentences expressing beliefs or intentions'.

<sup>34</sup> Habermas, J. (1984) op. cit., p.10.

<sup>35</sup> Ibid., p.xxxvii.

components of the lifeworld which are reproduced through communicative action are culture, society and personality [identity] and constitute the territory of the relations of knowledge. Reproduction of the lifeworld involves:

- *Cultural reproduction* of valid knowledge for understanding;
- *Social integration* in the solidarity of members of legitimate social orders; and
- *Socialisation* in development of the capabilities for social interaction in research as a sphere of social life.<sup>36</sup>

In the latter two, social integration and socialisation, the efficacy of action is not measured directly against criticizable validity claims or standards of rationality, but against ‘standards for the solidarity of members and for the identity of socialised individuals.’<sup>37</sup> The tendency towards legitimisation crises, according to Habermas<sup>38</sup> is symptomatic of late capitalist societies. Such crises occur when there are insufficient quantities of output from subsystems of human action to maintain and to reproduce the actions that are required to sustain the identity of the overall system. In higher education research practice, cultural reproduction ensures continuity of knowledge traditions and coherence of fields of research, sufficient for daily practice. Continuity and coherence can be measured by the rationality of knowledge accepted as valid. When cultural reproduction is disturbed by intrusive legitimisation and reward systems, there is loss of meaning that leads to corresponding legitimisation and orientation crises for research communities.

In such cases, the actor’s cultural stock of knowledge no longer covers the need for mutual understanding that arises with new situations. The interpretive schemes accepted as valid fail, and the resource “meaning” becomes scarce.<sup>39</sup>

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<sup>36</sup> Habermas, J. (1987) op. cit., p.142.

<sup>37</sup> Ibid., pp.138-139.

<sup>38</sup> Habermas, J. (1976) *Legitimation Crisis*, tran. Thomas McCarthy, Heinemann, London, p.49.

<sup>39</sup> Habermas, J. (1987) op. cit., p.140.

Social integration, for those involved in knowledge-generating communities, ensures 'that newly arising situations are connected up with existing conditions in the world in the dimension of social space,'<sup>40</sup> serving to coordinate actions and to stabilise the identity of the group for daily practice. Group stabilisation can be measured by the solidarity of the group members. When legitimation and reward systems privilege social relations that are oriented to the market, rather than to the relations of knowledge, then disturbances in the process of social integration become apparent.

Disturbances of social integration manifest themselves in *anomi* and corresponding conflicts. In such cases, actors can no longer cover the need for coordination that arises with new situations from the inventory of legitimate orders. Legitimately regulated social memberships are no longer sufficient, and the resource "social solidarity" becomes scarce.<sup>41</sup>

The process of socialisation of members of the lifeworld ensures that new situations are linked in time to existing situations, thereby securing generalised competencies for action in the enhancement and renewal of researching capability. This process ensures that individual life histories are in harmony with existing collective forms of life. Interactive capacities and styles of life can be measured by the responsibility of persons. When legitimation and reward systems privilege the 'products' of interactive capacities at the expense of social relations which nurture and sustain those capacities, then disturbances to the socialisation process become apparent.

. . . this can be seen in psychopathologies and corresponding phenomena of alienation. In such cases, actors' competencies do not suffice to maintain the intersubjectivity of commonly defined action situations. The personality system can preserve its identity only by means of defensive strategies that are detrimental to participating in social interaction on a realistic basis, so that the resource "ego strength" becomes scarce.<sup>42</sup>

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<sup>40</sup> Ibid., p.141.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

A central argument of this thesis is that current legitimation and reward systems are causing disturbances in the reproduction of the lifeworld of researchers in higher education. The existence of legitimation crises in higher education research communities creates action constraints and undermining tensions that weaken research as a sphere of social life. In other words, it is not the 'performance' of research judged by quantitative outputs that is the proper focus for quality appraisal but the processes which ensure effective cultural reproduction, social integration and socialisation. Without this type of information generated through advances in communicative rationality, the most readily available options for quality appraisal are the quantitative indicators of purposive-rational action which serve systems' integration. Therefore, the core task of the study is to develop appraisal options which enhance communicative rationality and as a result, the potential for sustaining research as a sphere of social life.

### **From Metatheory to Practical Action for the Present Study**

While the present study relies on the framework of Habermas' metatheory, the emancipatory intent of his proposed critical social action is limited, at the level of practical inquiry, for developing appropriate appraisal processes. This is because Habermas' program is purely abstract and as Bernstein notes, 'While Habermas acknowledges the nonreducible plurality of opinions that is characteristic of politics and action, he is not . . . always sensitive to the consequences of this plurality . . .'.<sup>43</sup> Although Habermas' theoretical framework serves as a reference system to explain the meaning and value in social action, the development of methodological protocols for implementation of this theory in everyday inquiry are noticeably absent from his writings. The present study, therefore, turns to the concept of 'public space' which has been proposed by the philosopher Arendt<sup>44</sup>. Arendt's notion of public space provides for the methodological possibility of implementing critical reflective practice for the purposes of social inquiry.

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<sup>43</sup> Bernstein, R. J. (1983) op. cit., p. 222.

<sup>44</sup> Ibid., pp.208-209.

The dialogue processes which are the central focus of the present study, create a *public space* in which communicative action becomes possible. In this context, the potential for enhanced understanding derives from the interaction which occurs through the medium of dialogue in the public space that is created by the process.

Bernstein, commenting on Arendt's philosophical analyses, proposes that enhanced understanding requires action which is 'intimately related to speech.'<sup>45</sup> Further;

[h]uman plurality is the basic condition of action and speech because [both] . . . take place *in between* men in their singularity and plurality. Action then is, intrinsically, political activity requiring the existence of . . . public space or *polis* within which individuals can encounter others and reveal who they are.<sup>46</sup>

The core of such action is open debate, where individuals may engage in attempts to persuade each other of the efficacy of their position. There is no 'rule' as such but the openness of debate and the opportunity for clarification, testing and purification of opinions. In this context, power is not experienced as 'power over' but as 'power to' and is constituted in and of participatory action. Power is 'essentially intersubjective and communicative; it comes into existence only in the mutual creation of a public space in between individuals.'<sup>47</sup> It is this form of power which emerges through communicative action. The emergence of this type of power raises the possibility for identification and elimination of distorted communication and therefore, conditions which constrain effective action for research. Judgment in this context, particularly judgment about what is important and worthwhile, is essentially a community phenomena because judgment is understanding that is born of 'community'. In this sense, communicative action and action research which form the two pillars of the present study, link back to the philosophy of Aristotle and his explanation of *phronesis*.

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<sup>45</sup> Ibid., p.207.

<sup>46</sup> Ibid., p.208.

<sup>47</sup> Ibid., p.210.

Phronesis is the form of reasoning and knowledge that involves a distinction between the universal and the particular . . . it is a form of reasoning [that yields] a type of ethical know-how in which what is universal and what is particular are co-determined.

In line with these principles then;

. . . it becomes all imperative . . . to foster and nurture those forms of communal life in which dialogue, conversation, *phronesis*, practical discourse, and judgment are concretely embodied in our everyday practices.<sup>48</sup>

The iterative dialogue processes which form the core of the focussed fieldwork activities in the present study, provide a ‘public space’ in which validity claims about effective action for research can be articulated and evaluated. The participatory nature of these fieldwork processes ensure that the ‘public space’ and the dialogue processes themselves are shaped by participants. In effect, the public dialogue space created in the study, is established through the descriptive accounts that participants give, of the their *research space*.<sup>49</sup> For these reasons, the present study takes *research space* as the unit of analysis.

### **Reframing ‘Colonisation’ as a Property of Dialectical Breakdown Between Lifeworld and System Values Spheres**

The rationale in the present study for development of an alternative, but complementary quality appraisal framework, is grounded in the concept of communicative rationality. The study seeks to exploit the possibility for developing legitimation and reward practices that facilitate meaningful and effective action for research.

The dialectical relationship between lifeworld and system, between contestation and

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<sup>48</sup> Ibid., p.229.

<sup>49</sup> Habermas, J. (1987) op. cit., pp.137-38. Habermas describes, ‘social space’ as that which is constituted through the reproduction of the symbolic structures of the lifeworld which is evidenced in socially-integrated groups.

institutionalisation, provides the ground in which alternative options for understanding, legitimating and valuing action can be generated amongst participants. Lifeworld and system, although different spheres of values and action are seen as interdependent. They are mutually dependent.

. . . the lifeworld depends upon the social system, both in terms of material production (the economy) and organisation (the state). The social system depends upon the lifeworld for both the reproduction of socialised individuals and the continuation of coherent cultural traditions. They are interdependent and interact in complex ways in the course of social development.<sup>50</sup>

However, a significant concern for Habermas, and therefore for the present study, is what he terms the 'colonisation of the lifeworld'. Colonisation takes place in the form of system imperatives impinging on lifeworld processes. As discussed previously, these imperatives arise via the economy, through the steering medium of money and via the state administration, through the steering medium of power. Habermas<sup>51</sup> proposes that both economic and administrative imperatives are taking over the territory that the lifeworld cannot afford to give up. The difficulty, according to Habermas is that the system's imperatives are encroaching on the tasks involved in cultural reproduction, social integration and socialisation. Habermas defines the dynamics of this colonisation process using the stark, conflictual metaphors of war and aggression.

The battle lines between lifeworld and system thereby achieve new relevance. Today economic and administrative imperatives embodied in the media of money and power encroach on areas that somehow collapse as soon as they are broken off from communication-oriented action and transferred to such interactions as are manipulated by these media . . .<sup>52</sup>

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<sup>50</sup> Roderick, R. (1986) op. cit., pp.130-131.

<sup>51</sup> Honneth, A., Knodler-Brunte, E. & Widmann, A. (1981) 'Dialectics of Rationalization', an interview with Jurgen Habermas, *Telos*, vol. 49, pp.18-19.

<sup>52</sup> Ibid.

Fraser,<sup>53</sup> in critiquing the work of Habermas proposes, instead, that the categorical distinctions between lifeworld and system are not near as clear cut, unidirectional and dichotomous as Habermas would suggest. Furthermore, Fraser proposes that the potentially ideological undertones in Habermas' private/public, paid and unpaid labour distinctions appear to provide grounds for claims of gender bias in the specifics of social reproduction and integration processes. Fraser suggests that;

. . . given the multidirectionality of causal influence in welfare capitalism, the terms 'colonization', 'intrusion', 'erosion' and 'dessication' [used by Habermas] are too negative and one-sided to account for the identity shifts manifested in social movements . . . If colonization is not an adequate explanation . . . then decolonization cannot be an adequate conception of an emancipatory solution.<sup>54</sup>

There is some support for these propositions in Habermas' own framing of intersubjectivity. In commenting on Mead's contribution in his own theory of communicative action, Habermas speaks of the importance of the 'linguistically constituted' intersubjectivity of the interaction system.<sup>55</sup> It is this intersubjectivity which enables the cultural reproduction, social integration and socialisation of individuals necessary for the existence of personal identity, society and culture. The concept of the linguistically mediated interaction system mentioned by Habermas, encompasses as he puts it, the 'entire system' of social action.<sup>56</sup> Both lifeworld and social system are included, because of their dialectical relationship, in this 'entire system' of social action. From this perspective, lifeworld and system can be appreciated as different levels of action within an 'ecological system' of *understandings* about the meaning and value of

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<sup>53</sup> Fraser, N. (1989) 'What's Critical about Critical Theory? The Case of Habermas and Gender', *Unruly Practices: Power, Discourse and Gender in Contemporary Theory*, University of Minnesota Press, Minneapolis. Ch.6.

<sup>54</sup> Ibid., pp.134-35.

<sup>55</sup> Habermas, J. (1987) op. cit., pp.10-11.

<sup>56</sup> Ibid., p.10.



action. This alternative more holistic framing is proposed as the metatheoretical framework for the present study because the 'colonisation' metaphor is inconsistent with nature of change processes inherent in the lifeworld/system dialectic.

The Macquarie Dictionary defines dialectic as a change process in which an idea or proposition (thesis) is transformed into its opposite (antithesis) and preserved and fulfilled by the combination of thesis and antithesis into a higher order truth (synthesis).<sup>57</sup> The concept of colonisation obscures the potential for transformational processes which could combine communicative propositions with those of antithetical systems propositions regarding merit and worth of action. By using the alternative metaphor of an 'ecology' of understandings, the dialectical relationship between lifeworld and system could be made visible, resulting in an enhanced framework for understanding legitimisation and reward systems.

This alternative framing of the lifeworld/system dialectic has been derived from the work on soft systems methodologies.<sup>58</sup> In these methodologies 'system' concepts are used not to define the nature and limits of action but as an epistemology which can be used to understand the complexity of mutually-shaping patterns of human interaction with the potential for healthy lifeworld/system dialectics.

Soft systems methodology is diametrically opposed to that of the radical functionalist framing of Luhmann's<sup>59</sup> systems thinking which is critiqued by Habermas. From Luhmann's theoretical perspective, rationality is seen as a property of the system and not of discourse or practical reason. In Luhmann's framing of action *as* system;

. . . the accelerated growth of complexity makes it necessary for society to convert to a form of reproduction that gives up the differentiation between power and truth in favour of a nature-like development withdrawn from reflection.<sup>60</sup>

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<sup>57</sup> Worldbook Dictionary A-K (1976) Field Enterprises Educational Corporation, Chicago.

<sup>58</sup> Checkland, P. & Scholes, J. (1990) *op. cit.*

<sup>59</sup> Habermas, J. (1975) *op. cit.*, p.136.

<sup>60</sup> *Ibid.*

Systems thinking used as an epistemology on the other hand, provides a number of concepts which are helpful in exploring the interdependencies and imbalances involved in the mutual shaping of the meaning and value of activity across different levels of action. The ideas of 'emergence and hierarchy, communication and control',<sup>61</sup> when used in the context of an 'ecology of understandings' provide a useful analytical tool. The central concept of systems thinking is that 'a complex whole [such as a form of life] may have properties which refer to the whole and are meaningless in terms of the parts which make up the whole. These are the so-called 'emergent properties'.<sup>62</sup> The implication of this concept is that there are hierarchies, for example, of meaningful activity within the whole. As Habermas observes;

. . . forms of life comprise not only institutions which come under the aspect of justice, but 'language games', historical configurations of habitual practices, group memberships, cultural patterns of interpretation, forms of socialisation, competencies, attitudes.<sup>63</sup>

From these observations, Habermas concludes that;

[i]t would make no sense to want to judge . . . the totality of a form of life, from the standpoint of individual aspects of rationality . . . Perhaps we should speak instead of a balance among moments incomplete in themselves, an equilibrated interplay of the cognitive with the moral and the aesthetic-expressive [arguments for validity claims].<sup>64</sup>

From this perspective, it appears that Habermas is himself using the concepts of *emergence* and *hierarchy* by including both lifeworld and system in a single, holistic

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<sup>61</sup> Checkland, P. & Scholes, J. (1990) op. cit., p.19.

<sup>62</sup> Ibid., pp.18-19.

<sup>63</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds), op. cit., p.262.

<sup>64</sup> Ibid.

framework of action. In addition to these two concepts of systems theory used in soft systems methodologies, communication and control provide for understanding about the dialectical processes that facilitate coherence, adaptability and self-sustainability of the whole.<sup>65</sup> In this sense, *control* is taken to be the assurance of integrity of understandings across different levels of activity systems, rather than strategic action which would involve an uneven power relationship. In other words, for intersubjective agreement about validity claims to be secured across levels of action systems, condensation rather than replacement of symbols of research quality would be necessary. The present study seeks a balance in quality appraisal practices which will be capable of sustaining and maintaining the creative and productive dialectical tension between lifeworld and system. It is for this reason that the ‘balance’ between purposive-rational and moral practical validity claims about the quality of research practice is of greatest interest.

It is possible to look for the synergies that characterise the mutual dependency of lifeworld and system from the perspective of a creative and productive dialectical tension. While Habermas highlights this mutual dependency,<sup>66</sup> he uses the language of an adversarial paradigm and conflictual metaphors<sup>67</sup> that are more in keeping with ideology than with communication. When the relationship is framed in terms of adversarial conflict, both the complexity and the place of human agency in choice and decision-making, which sustains patterns of activity, tend to be backgrounded. The present study aims to foreground these aspects of the relationship wherever possible through critical reflective practice, so a language that is grounded in ecological metaphors with a focus on facilitating understanding is the more productive option. Habermas himself has opted, in response to his critics, to better ‘unpack’ the complexity of action relationships by separating out analytically ‘. . . *withdrawal of motivation* affecting the occupational system and the *withdrawal of legitimation* affecting the system of domination, on the one

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<sup>65</sup> Checkland, P. & Scholes, J. (1990) op. cit., p.19.

<sup>66</sup> Habermas, J. (1982) ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds), op. cit., p.280

<sup>67</sup> Lakoff, G. & Johnson, M. (1980) op. cit., p.3.

side, from the *colonisation of the life-world* that is manifested primarily in phenomenon of loss of meaning, anomie and personality disorders, on the other side.’<sup>68</sup> While this development in his theoretical position acknowledges the complexity of human activity systems, Habermas’ position is still framed in adversarial language. This present study chooses as an alternative, to focus on the possibility of enhanced opportunities for learning through the medium of productive, dialectical tensions. The dialectical relationship between local needs for sustainability of the meaning and value of action and the validity claims to meaning and value of the more highly aggregated and formalised activity systems of the market and the state, provide the dialectical tension.

### **The Need for a Balance**

The present study proposes that the current competitive funding system for higher education research, tied as it is to infrastructure provision, has tended to undermine or to replace the understandings that coordinate action at the level of research practice. Instrumental and strategic action on the part of both government and institutional managers has served to transform symbols of academic excellence into symbols of ‘market success’. As a consequence, legitimation and reward systems have tended to replace the social relations of knowledge with the relations of the market where action is coordinated, not by shared understanding about the conditions of effective research practice, but by success in terms of steering media such as money and personal power over resources.

In order to address the current bias in legitimation and reward systems, this thesis draws on the social philosophy of Habermas with respect to the following concepts.

- There are different ways in which social action is coordinated depending on whether the action is taking place at the level of the system or at the level of everyday interaction between individuals.

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<sup>68</sup> Habermas, J. (1982) ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds) op. cit., pp.262 &.280.

- The value spheres of lifeworld and system differ because action serves different purposes.
- Understanding of the meaning and value of action requires first that the reasons behind the action and therefore the interests served are also understood.
- In order to understand the meaning and value of social action, there is a need for an inquiry framework that facilitates identification of the intended purposes to be served by action. Habermas' typology of social action provides such a framework in the form of instrumental, strategic and communicative action.
- Reflective action is the analytical process which enables those involved in, or affected by action, to judge the validity claims that are being made about the meaning and the value the action.
- Subjective validity claims are *the* primary source data for information about the meaning and value of action at the level of practice.
- Subjective validity claims that indicate processes of cultural reproduction, social integration and socialisation are being undermined by systems of legitimation and reward, are evidence that the efficacy of such systems is problematic.

This thesis, uses Habermas' metatheoretical framework to explore the possibility that, as key stakeholders in research practice, both the administrative managers of higher education institutions and the academic communities within these institutions have failed to meet their obligations to research as a sphere of social life. The thesis proposes that their lack of action in contesting the efficacy of instrumentally and strategically-oriented legitimation and reward systems has put at risk the social relations knowledge. It is the social relations of knowledge which ensure the self-sustainability, flexibility and responsiveness of higher education research communities. In order to achieve a balance between the values sphere of the system and the values sphere of higher education research practice, the present study employs a range of methodological tools for identifying and communicating the type of action that is meaningful and valued at the level of everyday research practice. The following chapter identifies five complementary methodological approaches which contribute to the design and implementation, in this study, of a quality appraisal tool that is grounded in effective action for research.

## CHAPTER 8

### CONCEPTUAL BASES FOR ENHANCING COMMUNICATIVE RATIONALITY

Chapter eight provides an overview of the conceptual bases from which the methodological tools used in the present study have been developed. The chapter explains how the axioms of naturalistic inquiry underpin each of the theoretical perspectives and why these axioms echo the work of Habermas. Practical ways of implementing Habermas' metatheory are explained in terms of the respective theories. The inquiry methods described in each of these perspectives provide different but complementary ways of tapping into the metalearning taking place in research practice. Most importantly, however, the chapter demonstrates why the central concept of *theories-in-use*<sup>1</sup> furnishes an appropriate conceptual tool for grounding appraisal practices in research activity at the level of the institution.

#### The Paradigm of Choice for Practical Action

The methodological principles underpinning the present study are those of the naturalistic paradigm because it was the basic beliefs or axioms of this paradigm that provided the best theoretical and conceptual 'fit' with questions of social action. Guba and Lincoln<sup>2</sup> contrasted the axioms of a naturalistic paradigm with those of conventional scientific inquiry. Their chart, presented in this chapter (Chart 8.1), is included not as a definitive statement of belief systems, because not all constructivists adhere to a relativist ontology in the sense described by Guba and Lincoln. Rather, the chart is included, for the purposes of the present study, as an example of the types of claims made from the respective axiomatic platforms.

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<sup>1</sup> Agyris, C., Putnam, R., & McLain Smith, D. (1985) op. cit., pp.84-85.

<sup>2</sup> Guba, E.G. & Lincoln (1989) op. cit., p.84.

**Chart 8.1 : Contrasting Conventional and Constructivist Belief Systems**

CONVENTIONAL BELIEFS	CONSTRUCTIVIST BELIEFS
<p><i>Ontology:</i></p> <p>A REALIST ONTOLOGY asserts that there exists a single reality that is independent of any observer's interest in it and which operates according to immutable natural laws, many of which take cause-effect form. Truth is defined as that set of statements that is isomorphic to reality.</p>	<p>A RELATIVIST ONTOLOGY asserts that there exist multiple, socially constructed realities ungoverned by any natural laws, causal or otherwise. "Truth" is defined as the best informed (amount and quality of information) and most sophisticated (power with which information is understood and used) construction on which there is consensus (although there may be several constructions extant that simultaneously meet that criterion).</p>
<p><i>Epistemology:</i></p> <p>A DUALIST OBJECTIVIST EPISTEMOLOGY asserts that it is possible (indeed mandatory) for an observer to exteriorize the phenomenon studied, remaining distant from it (a state often called "subject-object dualism), and excluding any value considerations from influencing it.</p>	<p>A MONISTIC, SUBJECTIVIST EPISTEMOLOGY asserts that an inquirer and the inquired-into are interlocked in such a way that the findings of an investigation are the literal creation of the inquiry process. Note that this posture effectively destroys the classical ontology-epistemology distinction.</p>
<p><i>Methodology:</i></p> <p>AN INTERVENTIONIST METHODOLOGY strips context of its contaminating (confounding) influences (variables) so that the inquiry can converge on truth and explain nature as it really is and really works, leading to the capability to predict and to control.</p>	<p>A HERMENEUTIC METHODOLOGY involves a continuing dialectic of iteration, analysis, critique, reiteration, reanalysis, and so on, leading to the emergence of a joint (among all the inquirers and respondents, or etic and emic views) construction of a case.</p>
<p>Ref: Guba, E. G. &amp; Lincoln, Y. S. (1989) Fourth Generation Evaluation, Sage Publications, Newbury Park, California, p.84.</p>	

The methods which flow from a particular axiomatic stance are grounded in the belief system of the paradigm. The underlying axiomatic belief system, therefore, determines the logical framework of the inquiry, the type of data collected, the credibility and reliability criteria and the research design. A conventional scientific (purposive-rational) approach to appraisal of research would be framed in terms of a single, tangible, fragmentable reality that was identifiable and measurable. Within this framework, the merit and worth of action for research would be judged by quantitative, performance-based criteria. Claims about the merit and worth of research would be substantiated by performance measures such as the dollar value of research grants, publication counts and citation profiles. One difficulty with a fragmentable reality, however, is that the demand

for valid information grows exponentially with advances in technologies which are capable of 'fragmenting' reality, creating a self-reinforcing cycle of demand for measurable data. This tendency is evident in current debates concerning the 'validity' of citation counts for quality appraisal of higher education research.<sup>3</sup> The present study holds that fragmenting reality for the purposes of judging merit and worth can offer at best, only a partial view of the meaning and value of action. The more abstract the measures adopted, the less relevance they have for the lifeworlds that are the source of meaning which they purport to represent.

This study accepted that there are multiple, interpreted social 'realities' regarding the value of action for research so the inquiry was directed towards identifying and understanding these multiple 'realities'. Claims made by participants about the merit and worth of action for research were substantiated through communicative action. Furthermore, because the behavioural worlds of participants were socially constructed, it also followed that the outcome of the present inquiry would be a social construction that was grounded in research practice.

### **Communicative Action and the Choice of a Reflective Self-Inquiry Practices**

The objectives of the present study demanded an inquiry paradigm based on a core principle of communicative action.<sup>4</sup> In communicative action, realising one's aims or carrying out one's plan of action requires interpreting a situation and arriving at agreement about that interpretation for coordinated social action. These interpretations are continuously in process because human action serves to reinterpret and sustain the meaning of social roles and related spheres of social action. Habermas proposed that;

[i]f a shared definition of the situation has first to be negotiated, or if efforts to come to some agreement within the framework of shared situation definitions fail, the attainment of consensus, which is normally a condition for pursuing goals, can itself become an end.<sup>5</sup>

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<sup>3</sup> Print, M. & Hattie, J. (1995) op. cit., p.30.

<sup>4</sup> Habermas, J. (1984) op. cit., pp.94-101.

<sup>5</sup> Habermas, J. (1987) op. cit., p.126.



The present study sought, through an action researching approach, to develop a shared definition of appropriate quality appraisal practices for higher education research. The appropriateness of quality appraisal practices generated with such an approach could be assured because they would be grounded in the practical theory of everyday research practice.

In respect of action researching principles, the present study drew on the work of Kemmis, McTaggart and the Deakin University Action Researching group.<sup>6</sup> With the development of the Deakin group's position, action research was understood as self-reflective inquiry undertaken by stakeholders who became active participants in an inquiry process. The motivation for participating in an inquiry of this type was to improve the rationality, justice, coherence and satisfactoriness of:

- The participants' own social practices;
- Their understanding of these practices; and
- The institutions, programs and ultimately the society in which these practices are carried out.

Enhanced understanding about the rationality, justice, coherence and satisfactoriness of research practice was sought through collective *self-inquiry* processes undertaken by the author and participants. The focus of collaborative effort was 'the *critically examined* action of individual group members.'<sup>7</sup> In focusing on the experience and understandings of individuals, the action research approach taken in this study, offered a way for participants to 'organise the conditions under which they [could] learn from their own experience, and make [that experience or metalearning] . . . accessible to others.'<sup>8</sup> The

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<sup>6</sup> See Kemmis, S. & McTaggart, R. (1988) op. cit.

<sup>7</sup> Ibid., P.5.

<sup>8</sup> Ibid., pp.8-9.

methodological frameworks described in this chapter demonstrate how it was possible to develop legitimation and reward practices for research that did not:

- Devalue researchers' validity claims about the type of support required for continuity and coherence of fields of research;
- Undermine coordination of action and destabilise the identities of research groups; and
- Fail in their obligation to nurture and sustain the development of interactive capacities necessary for effective research practice.

Ultimately, the present study was grounded in the structures of the lifeworld of researchers, which provided the logical framework for development of a grounded social theory of quality appraisal for research practice.

### **Organisational Learning - A Rationale for Grounding Legitimation Criteria in Theories-In-Use**

In order to identify and to understand what researchers *mean* by effective action for research, the present study drew on a number of complementary theoretical approaches that dealt with 'second order' learning issues, or *metalearning*. Among these approaches were the reflective practice<sup>9</sup> of action research and, in particular, organisational learning<sup>10</sup> which provides the key concepts of *theory of action* and *theory-in-use*. A theory of action, according to Schön, is a theory of deliberate human behaviour which frames both the intention and the meaning of the action.<sup>11</sup> When there is a match between intention and outcome then there is confirmation of the theory of action. However, if there are

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<sup>9</sup> See Schön, D.A. (1983) op. cit.

<sup>10</sup> See Agyris, C. (1992) op. cit.

<sup>11</sup> Agyris, C. & Schön, D. A. (1974) op. cit., p.6.

unintended consequences, then there is a mismatch or an error.<sup>12</sup> Theory of action is a concept that is useful for quality appraisal purposes because it enables practitioners to contrast the stated meaning and value of action with the meaning and value of activities which are evident from everyday practice.<sup>13</sup> The dialectical counterpoint of a theory of action that makes this contrast possible is practical theory or theory-in-use.

When individuals are asked what they value or what they believe facilitates or constrains research practice, it is not theory-in-use, however, that is proffered but rather their espoused theory or theory of action.<sup>14</sup> While a theory of action may provide information about what individuals think are the reasons that they believe lie behind their actions, there is sometimes a significant gap between this theory and that which does guide their action at the level of practice. Theory-in-use is the domain of moral-practical, as opposed to empirical-analytic action.<sup>15</sup> For the purposes of the present study, theory-in-use defines the territory of the lifeworld of researchers and what is valued in terms of action because it is this action that sustains and renews the lifeworld. As such, it is theory-in-use which serves as the window into the processes that ensure cultural reproduction, social integration and socialisation<sup>16</sup> in individuals, collectives or groups involved in research practice.

Theory-in-use, as described by Agyris and Schön,<sup>17</sup> constitutes a vast resource of practical knowledge that often remains tacit. Theory-in-use is practical knowledge about research-related action that researchers themselves have found to be effective and therefore of value in the daily activities of their discipline or field of research.<sup>18</sup> Although theory-

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<sup>12</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., pp.85-86.

<sup>13</sup> Schön, D. A. (1983) op. cit., p.6.

<sup>14</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., pp.81-82.

<sup>15</sup> Roderick, R. (1986) op. cit. p.101.

<sup>16</sup> Habermas, J. (1987) op. cit., p.145.

<sup>17</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., p.85.

<sup>18</sup> Becher, T. (1987) 'Disciplinary Discourse' *Studies in Higher Education*, Vol 12, No 3, p.262.

in-use is largely tacit, it is very important because it accounts for the continuity of organised activity and the identity of an individual, a group or an organisation.<sup>19</sup> So important in fact is theory-in-use that Agyris<sup>20</sup> has, in his model of organisational learning, labelled the principles for action which derive from this source as 'governing variables' or 'master programs'. Governing variables are the explanatory 'logic' behind the action. For example, if because of preferred patterns of social relations an individual wants to suppress conflict, this governing variable will determine that no controversial comments will be made by the individual in social interaction.<sup>21</sup> In order to prevent the surfacing of any controversy in social situations such a person may adopt a strategy of talking only and often about issues upon which everyone agrees. While learning has taken place, in that a strategy of affirming agreeable interactions has been developed and implemented, there has been no change in governing variables. Another option open to the individual concerned would be to change the governing variables themselves, such as acceptance of conflict as a part of social interaction. This change in governing variables would result in learning of a different nature, learning that has the potential to facilitate organisational learning.

Organisational learning, according to Agyris and Schön, involves the detection and correction of error. It is important for methodological purposes to note that organisations do not literally 'detect errors' or 'learn', but that organisational learning is a metaphor.<sup>22</sup> Individuals, acting as agents of organisations produce behaviour that leads to learning when they observe either a match or a mismatch between theory of action and theory-in-use. On the other hand, individuals also produce behaviours that prevent organisations learning as in the case of the person who actively worked against the surfacing of controversy.

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<sup>19</sup> Agyris, C. & Schön, D. A. (1978) op. cit., p.15.

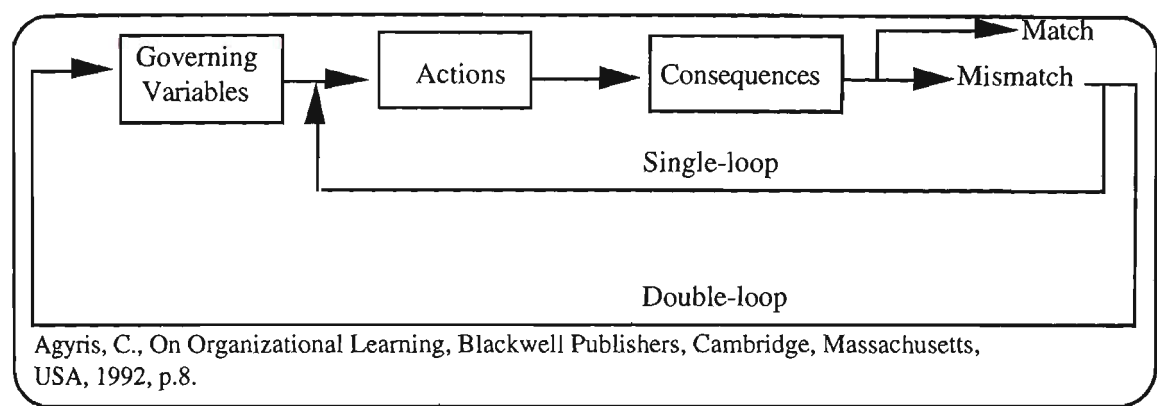
<sup>20</sup> Agyris, C. (1992) op. cit., pp.9 & 10.

<sup>21</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., p.86.

<sup>22</sup> Agyris, C. & Schön, D. A. (1978) op. cit., p.11.

Learning of the type which creates the behavioural worlds of social interaction, can be either single or double-loop. Single and double-loop learning are represented diagrammatically by Agyris in Figure 8.1. When the error detected and corrected permits the organization to carry on its present policies or achieve its present objectives, then the error-detection-and-error-correction process is *single-loop* learning.’<sup>23</sup>

Figure 8.1 : *Single-loop and Double-loop Learning*



In single-loop learning there is no contestation of norms and subjective validity claims about the meaning or value of action. If these behaviours continue and are supported by others, then the likelihood of intersubjective agreement about situation definitions is progressively eroded.<sup>24</sup> This is because, in situations of perceived threat, individuals will ‘act in ways that inhibit the generation of valid information and [therefore] create self-sealing patterns of escalating error’<sup>25</sup> or in Habermasian terms - distorted communication. In single-loop learning situations individuals concerned;

... create conditions of undiscussibility, self-fulfilling prophecies, self-sealing processes, and escalating error and they remain unaware of their responsibility for these conditions.<sup>26</sup>

23 Ibid., p.2.  
24 Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., pp.93-96.  
25 Agyris, C. & Schön, D. A. (1978) op. cit., p.61.  
26 Agyris, C., Putnam, R. & McLain Smith, D. (1985) op. cit., p.93.

On the other hand, there is a type of organisational learning that brings into question the governing variables. Agyris<sup>27</sup> has labeled this double-loop learning. Double-loop learning is called for when action fails to achieve intended consequences. The need for double-loop learning is characteristically expressed in the emergence of social conflict and can be traced to governing variables or the subjective validity claims<sup>28</sup> of theories-in-use. Agyris and Schön, through their research, have developed two models or ideal types to describe the theories-in-use that underpin single and double-loop learning situations. These are Model I for single loop learning and Model II for double loop learning.<sup>29</sup> The governing variables for the respective Models are very different. Model I governing variables are those of purposive-rational action and it is these that underlie instrumental or strategic interests and action orientations. Agyris and Schön have found a high level of consistency in Model I governing variables which typically include:

- Achieve the purpose as the actor defines it;
- Win, do not lose;
- Suppress negative feelings; and
- Emphasise rationality.<sup>30</sup>

For the purposes of the present study, the type of ‘behavioural worlds’ that are generated from these governing variables are ones in which ‘unilateral control over others’ is the predominant interest being served. Control is sought in order to protect the subjective validity claims of self and others as to the meaning and value of action. The consequences of this Model in use include ‘defensive interpersonal and group

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<sup>27</sup> Agyris, C. (1992) *op. cit.*, pp. 8-9.

<sup>28</sup> Pusey, M. (1987) *op. cit.*, p.79.

<sup>29</sup> Agyris, C. & Schön, D. A. (1978) *op. cit.*, pp.2-3.

<sup>30</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) *op. cit.*, pp.88-89.

relationships, low freedom of choice, and reduced production of valid information.’<sup>31</sup> This is because there is no public space free from coercion, with the result that public ‘testing’ of subjective validity claims is generally absent in social relations. In this type of situational context, error increases and effectiveness in problem-solving and execution of action declines.

For the present study, the usefulness of Model I as an ideal type is that it provides an analytical tool for determining the nature of tensions between espoused theories of action and theories-in-use evidenced in what is valued in practice. Conflict in Model I systems is essentially unproductive and undermining in terms of effective action and the type of tensions which are present fall into these categories. Conflicts in Model I organisational environments emerge because situations are ‘framed’ in different ways by different individuals. In such cases, situation definitions in relation to the relevant social action are at variance.<sup>32</sup> In Habermasian terms, communication, should it occur in these circumstances is likely to be distorted because there is little or no intersubjective agreement about the purposes being served and the value of action for research.

On the other hand, the relationship between theory of action and theory-in-use can be of a dialectical nature and involve tensions of a different nature. A dialectical tension between theory of action and theory-in-use is very necessary for what Habermas would describe as progress in communicative rationality. The notions of communicative action and Model II theories-in-use are represented by double-loop learning behaviours. Both are dependent upon symmetrical communication situations in which the force of the better argument rather than instrumental or strategic action determines the efficacy of validity claims. It is in this sense that *communicative rationality* underpins progress or

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<sup>31</sup> Ibid., p.93.

<sup>32</sup> Ibid., p. 47.

learning in both communicative action and Model II learning situations.<sup>33</sup> The governing variables of Model II theories-in-use include:

- Valid information
- Free and informed choice, and
- Internal commitment

In contrast with Model I theories-in-use, Model II theories-in-use<sup>34</sup> create behavioural worlds which value the sharing of control amongst those who are involved in implementing action, and combine advocacy and inquiry in reflective practice. Subjective validity claims are illustrated with directly observable data. The surfacing of conflicting views is encouraged because public testing of validity claims is valued as a social behaviour. The consequences of organisational group members employing Model II theories-in-use are that 'previously undiscussible issues will be brought to the surface, assumptions will be tested and corrected, and self-sealing processes will be interrupted.'<sup>35</sup> In this type of behavioural world there will be 'less need for camouflage and games of deception.'<sup>36</sup>

Consistent with the principles of Model II theories-in-use, the iterative dialogue processes employed in the present study aimed to involve participants in collaborative reflective practice. Through a 'weighting' process, demonstrated in Table 8.1, participants were provided with the opportunity to make explicit, subjective validity claims about the meaning and value of action for research. By involving themselves in the inquiry processes of identifying and making explicit the impact of both constraining and facilitating practices, participants created a 'public space' for reflective practice. The

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<sup>33</sup> Agyris, C. & Schön, D. A. (1978) *op. cit.*, pp.98-101.

<sup>34</sup> Agyris, C., Putnam, R. & McLain Smith, D. (1985) *op. cit.*, p.98-102.

<sup>35</sup> *Ibid.*, p.102.

<sup>36</sup> *Ibid.*, p.102.



feedback and weighting activities which made up the inquiry process, enabled those involved to raise and to test, their subjective validity claims about effective action for research in their particular research space. While in-depth explanation is provided in Chapter 9, Table 8.1 provides a preliminary indication as to how subjective validity claims could be made explicit for public testing. The weighting placed in the grid indicates the importance of the activity or circumstances for the individual concerned, for constraining or facilitating their research activity at the level of research practice.

Table 8.1 : Value of Action For Research Weighting Grid

Domain	No	Comments	C/F	Constraining					0	Facilitating					Sect
				5	4	3	2	1		1	2	3	4	5	
Org. & Manag.	25	We need a formal organisational structure to indicate who is responsible to whom	C/F			3									1
Org. & Manag.	7	While there is an overall aim for the research program, everyone contributes as much as they can to achieving its goals	F											5	3
Concept & Theoret.	18	It is essential that researchers in this area have a good working knowledge of both qualitative and quantitative methods	F										4		3

These inquiry processes were based on communicative rather than purposive rationality and on intersubjective agreement about *effective* or *ineffective* research practice situation definitions. The research design used in this study, therefore, provided the possibility of creating conditions for organisational learning.

The expected outcome of the inquiry was shared understanding about the differences between the type of action which was valued at the policy level and that which was valued

and necessary for effective everyday research practice. Within this research design, therefore, reflection on the relationship between theory of action and theory-in-use was used as the basis for developing shared understandings about the effectiveness of action for research.

The efficacy of the broader quality appraisal practices which serve purposive-rational systems imperatives is to a large extent dependent upon the existence of this local level dialectic between theory of action and theory-in-use. This is because the naming and framing of quality research can be continually monitored for efficacy with regard to lifeworld processes at the level of theories-in-use. Should researchers simply accept the current limited framing of research quality as output-oriented, performance-based measures,<sup>37</sup> then the possibility for a lifeworld/systems dialectic in quality appraisal practices would necessarily, be eroded. If researchers are to value and sustain the type of action that does not result in 'escalating error', in failure of interpretive schemes, disintegration of social solidarity and alienation, then they will need more than the information currently available to them in the form of output-oriented, performance-based indicators.

The present study proposes that organisational learning theory presents a strong argument for the importance of local quality appraisal practices that focus on moral-practical action. In order to assure the quality of research practice and sustainability of research as a sphere of social life, researchers and university administrative bodies will require information about quality research practice that enables them to sustain and enhance the lifeworld of research practitioners. For this to be possible, research stakeholders will require

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<sup>37</sup> Sachs, J. (1995) 'Bridging the Gap Between Quality Improvement and Quality Assurance : A Project at Griffith University, in *Journal of Institutional Research in Australia* vol.4, no.1, May, p.93.

enhanced understanding of the behavioural world which researchers daily construct and reconstruct through their practical action. The type of appraisal practices required for this enhanced understanding would be those which focused on effective metalearning processes. Metalearning processes necessarily involve Model II learning systems. Alternatively, if lifeworld reproduction processes in research practice continue to be based on Model I learning systems, then it is more likely that legitimization crises in the relations of knowledge will ensue. Based on Habermas' social philosophy, the evidence of such crises will be seen in:

- Perceived erosion of continuity and coherence of fields of research (discourses);
- Disintegration, anomie and conflict in contexts of research practice (practices); and
- Absence of interactive capacities for enhancement and renewal of researching capabilities (social relations).

### **An Alternative Paradigm for Enhancing Communicative Rationality**

Based on the foregoing discussion of organisational learning, the thesis proposes that a new paradigm of quality appraisal is called for if the potential for legitimization crises arising in research practice is to be reduced. Such a paradigm would be based on local action at the institutional level which could make explicit theories-in-use as a resource for effective metalearning about effective action for research. Schön explains that, 'Organizational theory-in-use is encoded in private images and in public maps'<sup>38</sup>. In the present study, '*talk as action*'<sup>39</sup> was the principle source of such maps. It was these images and maps which provided the 'media for organisational learning' to occur. Organisational learning cannot occur without individual learning, but unless the insights about more effective actions, strategies or goals can be 'embedded in organisational memory'<sup>40</sup> through shared mental maps of practice, organisational learning will not

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<sup>38</sup> Agyris, C. (1992) op. cit., p.17.

<sup>39</sup> Agyris, C. & Schön, D. A. (1978) op. cit., p.57.

<sup>40</sup> Agyris, C. (1992) op. cit., p.19.

occur. It is in this way that theory-in-use influences both the long term effectiveness of the actor's chosen behaviours and his/her capacity to learn new ways of framing the meaning and value of their interaction with the world.<sup>41</sup> One of the central aims of the present study was to create, with the selected methodological tools, a 'public space' in which the potential for generating and sharing mental maps of respective research spaces was enhanced.

The perceived topography and key features of the research space necessarily vary according to the position and status of each individual actor within the research space.<sup>42</sup> The present study sought therefore to build a profile of generic categories of action which were a descriptive profile of research practice.

The contribution of an individual to the human activity systems within the social space defined by research activity is mediated by the individual's understanding or perception of the conditions that prevail. It is this understanding of the prevailing conditions which is encoded in both their theory of action and their theory-in-use. Such perceptions are shaped by the conditions established through the recurring patterns of action that serve to organise interaction for research.<sup>43</sup> However, this study hypothesises the respective patterns of significance defining the individual's research space, will necessarily fall within a broad pattern of activities that define research as a sphere of social life. It is substantiation and confirmation of this broad pattern which is sought as an outcome of the present study, in the form of a generic action-oriented system for explaining and describing effective action for research. A generic action-oriented system has to be built, however, from the 'bottom-up' if it is to provide the basis for quality appraisal practices that condense rather than replace the subjective validity claims of research practitioners about effective action for research.

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<sup>41</sup> Schön, D. A. (1983) op. cit., pp.50 - 68.

<sup>42</sup> Bourdieu, P. (1990) *In Other Words: Essays Towards a Reflexive Sociology*, trans. Adamson, M., Stanford University Press, Stanford, California, p.131.

<sup>43</sup> Checkland, P. & Scholes J. (1990) op. cit., p.20.

In the present study, the individual researcher's perceptions of his/her environment were crucial in building understanding about what can be valued in different contexts of research practice. Bottom-up development was necessary because, as Geertz<sup>44</sup> observed; 'man is an animal suspended in webs of significance he himself has spun'. Based on the the concepts of the previous theoretical discussion, understanding about the patterns of significance and mutually shaping forces in the research space, is a necessary precondition for developing reward and legitimation systems that sustain core processes of research practice. The present study proposes that it is action-specific understanding that could provide the information required for grounding formative quality appraisal judgments.<sup>45</sup> Formative merit judgments concern the intrinsic value of an activity such as research and are oriented towards improving practice. Merit judgments, if they are to have validity, however, need to be grounded in communicative rationality which derives its particular logic from the moral and ethical cognitive reference systems<sup>46</sup> of research practice. This is because the intrinsic value of research is necessarily determined by the understandings of research practitioners who can reflect on their theories-in-use as a resource for determining:

- What counts as valid evidence of quality research practice;
- What is accepted as legitimate orders of social relations for research; and
- The nature of legitimation and reward systems which do actually serve to sustain and enhance researching capabilities and academic identity.

From this local understanding it is both possible and necessary to tack out to the broader systems which influence research-related activities. Central to these are the legitimation and reward structures that shape action from the broader level of political and economic systems.

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<sup>44</sup> Geertz, C. (1973) 'Thick description: toward an interpretive theory of culture', in Geertz, C. *The Interpretation of Culture*, Basic Books, New York, pp.3-30.

<sup>45</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>46</sup> Habermas, J. (1987) op. cit., p.136.

## Personal Construct Theory - A Framework for Mapping the Meaning and Value in Individual Action

Research as a sphere of social life cannot exist without the resources provided by the broader social and economic systems. On the other hand, research cannot continue to exist without the action of individuals who, by their continuing action, sustain and renew research environments as purposeful activity systems. It is the individual who plays an active role in the construction of the world which he or she inhabits through interpretation and reinterpretation of action and events that constitute the research environment.

The present study seeks to provide a window into this ongoing process of interpretation or construal with the support of Personal Construct Theory (PCT).<sup>47</sup> Personal Construct Theory was developed by the psychologist George Kelly<sup>48</sup> around the central philosophical assumption which he termed 'constructive alternativism'. Kelly asserted with the principle of subjective alternativism, that 'reality does not directly reveal itself to us, but rather it is subject to as many alternative ways of construing it as we ourselves can invent.'<sup>49</sup> Kelly proposed that constructive alternativism was a way of framing human understanding and action that was consistent with the unity of experience of each individual. Just as the social philosophy of Habermas has been criticised by Gadamer for being 'internalist' and 'individualist' so too has the theoretical position taken by Kelly been criticised. Zuber-Skerritt, in her development of a theoretical framework for action research notes that Kelly's theory has been criticised on the grounds that it is 'too mentalistic' and 'individualistic'.<sup>50</sup> Kelly's critics adhere to traditional psychology, with its fragmentationist perspective in which mind and emotion are uncoupled for the

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<sup>47</sup> Bannister, D. & Fransella, F. (1986) op. cit., Chapter 1.

<sup>48</sup> See Kelly, G. A. (1991) *The Psychology of Personal Constructs*, Volume 1 - A Theory of Personality, (Reprint. Originally published: New York: Norton, c1955) Routledge, London.

<sup>49</sup> Adams-Webber, J. R. (1979) *Personal Construct Theory: Concepts and Applications*, John Wiley and Sons, New York, p.1.

<sup>50</sup> Zuber-Skerritt, O. (1991) op. cit., pp. 62-63.

purposes of behavioural analyses. Zuber-Skerritt points out that Kelly takes an alternative pathway by conceptualising the person as an holistic entity in which cognition, emotion, mind, body and behaviour are all, at the level of action, derivatives of 'construct systems in a state of change'.<sup>51</sup> As in the case of the Habermasian action theoretic framework, Kellian theory has been incorporated in the present study because of its utility for explaining the phenomena in question, that is, the meaning and value of action for research.

The fundamental proposition stemming from Kelly's central philosophical assumption of constructive alternativism, was that; 'A person's processes are psychologically channelized by the ways in which he (sic) anticipates events.'<sup>52</sup> In other words, in order to make the world a more predictable place, a person anticipates events by construing or creating models of events in action. The aim of this process is to improve the likelihood that their action will achieve its intended purpose so action is said to be 'channelised' in that channels are established as means to ends. Kelly<sup>53</sup> proposed that the guidelines shaping a person's action are drawn by the person him/herself. These guidelines are therefore personal constructs which may be invalidated by experience, redrawn or revalidated as the individual adjusts his/her thoughts and processes to achieve more effectively, intended outcomes. These personal constructs have been described by Kelly, as 'the axes of reference man [sic] contrives to put his psychological space in order and to plot his varying courses of action.'<sup>54</sup>

Everyday experience can be transformed depending on the way in which experience is construed by the individual concerned. It is this possibility that accounts for both the

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<sup>51</sup> Ibid., p. 63.

<sup>52</sup> Kelly, G. A. (1991) op. cit., pp.32-35.

<sup>53</sup> Kelly, G. A. 'Ontological Acceleration', in Maher, B. (ed) (1979) *Clinical Theory and Personality : Selected Papers of George Kelly*, Krieger, New York, 1979, p.36.

<sup>54</sup> Ibid.





Agyris and Schön would call theories-in-use.<sup>61</sup> It was these theories-in-use, about the meaning and value of action for research, that the present study took as its focus for exploring and articulating claims about *effective* action for research. In order to understand what individual participants meant by effective action for research, the terms Constraining < - - - > Facilitating were used by the author as contrastive poles to explore with participants, what they claim is *similar* to and *different* from effective action for research. While the construct Constraining < - - - > Facilitating was a personal creation of the researcher, it did provide a starting point for negotiating with participants, shared situation definitions about effective action for research.

**Corollary 2** The individuality corollary - persons differ from each other in their construction of events

In Habermasian terms, it was the ‘truthfulness’ of individuals’ validity claims about the meaning and value of action for research that were the standards by which the person concerned, negotiated common situation definitions. The ‘truthfulness’ or sincerity of a person’s subjective validity claims could not be proven or disproven because ‘truthfulness’ is itself a property of the individual’s chosen ‘axes of reference’. Kelly echoed Habermas on this point. Habermas proposed that validity claims in the world of personal experience could not be addressed through the argumentation of discourse, because ultimate agreement could not be assumed to be possible.<sup>62</sup>

**Corollary 3** The organisation corollary - Each person characteristically evolves, for his/her convenience in anticipating events, a construction system embracing ordinal relationships between constructs.

An individual’s meaning-making system is composed of constructs that are organised in ordinal relationships, all linked in a complex and multidimensional scaffold of understanding about the world. The most highly abstract superordinate constructs can be related to hundreds or more practical, lower order constructs. Because the relationship

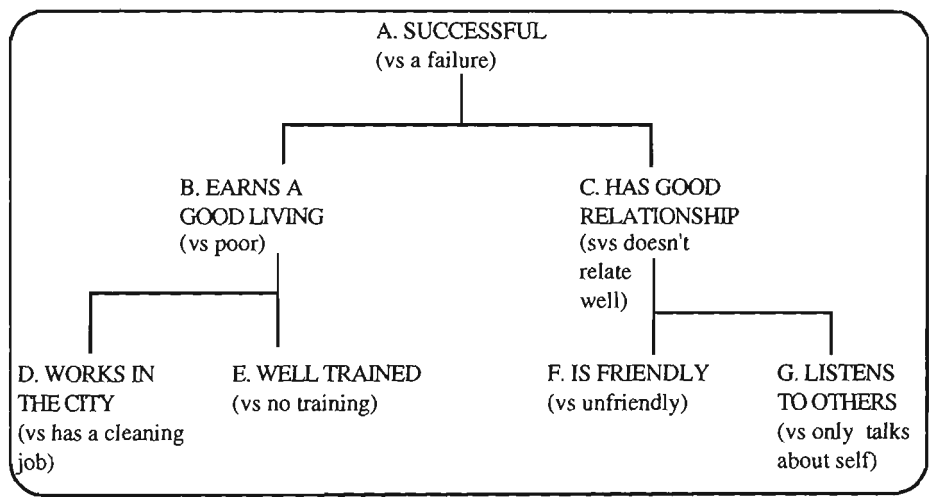
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<sup>61</sup> Agyris, C., Putnam, Robert, & McLain Smith, D. (1985) op. cit., p.85.

<sup>62</sup> Roderick, R. (1986) op. cit., pp.113-115.

between constructs is ordinal, one construct which applies hierarchically to other lower order constructs is said to superordinate to another construct, which applies hierarchically to fewer, lower order constructs. Conversely, the subsumed construct is said to be subordinate in relation to the construct which is subsuming it. The example provided by Dalton and Dunnet and presented in Figure 8.2, demonstrates firstly, that the more abstract constructs are at the 'top' and that constructs become less abstract towards the 'bottom'. Secondly, the construct [has good relationships vs doesn't relate well] is subordinate to [successful vs failure] but this construct, in turn, is superordinate to [friendly vs unfriendly] and [listens to other vs only talks about self].<sup>63</sup>

**Figure 8.2 :** *Example of construct hierarchy*



Although presented here as a static linked structure, construct systems are perpetually in process because they are altered continually by the person creating them in order to achieve better anticipation, and therefore predictive certainty, about events through enhanced understanding. Figure 8.2 also demonstrates that while all constructs have two contrasting poles, this is irrelevant to the organisation corollary because it is simply not possible to have one pole without the other. For the purposes of mapping the organisational structure of a construct system, it is only necessary to know one of the poles, the emergent or preferred pole.

<sup>63</sup> Kelly, G.A. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p.11

The importance of the organisational corollary for the present study was threefold.

- a. CONSTRAINING and FACILITATING may or may not be contrastive poles for the participant concerned in relation to a particular action for research. For this reason, when a descriptive statement was categorised as FACILITATING it could not be assumed that the opposite action would be CONSTRAINING.
- b. While the constructs CONSTRAINING and FACILITATING might figure in the participant's own system of constructs for effective action, it could not be assumed that these were in any way superordinate constructs or even opposite poles of a construct. Therefore, when a participant made a decision that a statement described either constraining or facilitating action, there might be aspects of both constraint and facilitation. This could occur because the participant was construing the activity or conditions in terms of an alternative construct of their own, that was more appropriate for them in contrasting effective with ineffective action. In such cases there might only be minimal overlap between the construct CONSTRAINING < - - - > FACILITATING and the one which they would have chosen to judge the value of the action or conditions for their research practice.
- c. The attribution of weightings which indicate both constraining and facilitating aspects could be represented by a tension with weightings on both sides of the grid. The presence of a tension could signal the possibility that there was a higher order construct by which the tension could be resolved. For the purposes of the present study, the tension denoted a directional trend in the described activity or resultant conditions<sup>64</sup> - either towards constraining and undermining or alternatively, towards creative and productive action for research. If the participant had access to a higher order construct within their system of constructs that supported action oriented towards resolution of the tension, then the tension would be creative and productive. Alternatively, if the co-occurring, constraining and facilitating aspects of the action indicated a tension that was unresolvable within the participants' construct system, then it was likely that the tension would reflect a tendency towards action that reinforced ineffective action. In the work of Agyris and Schön, such a tension would be indicative of single-loop learning behaviours.

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<sup>64</sup> Kelly, G. A. 'Ontological Acceleration', in Maher, B. (ed) (1979) op. cit., p.12.

**Corollary 4** The dichotomy corollary - a person's construction system is composed of a finite number of dichotomous constructs.

The author used CONSTRAINING < - - -> FACILITATING as contrastive poles to explore with participants, what they *meant* by effective or ineffective action for research. This construal of action was not elicited from the participants. It was for all practical purposes, a construct in search of elements. The construal of action as constraining or facilitating, may or may not have been present in participant's system of constructs for effective research practice. However, the usefulness of having these two contrastive poles CONSTRAINING < - - - > FACILITATING, was that action which was seen as constraining research practice, was by definition *ineffective* for the participant concerned. It was ineffective because it contrasted with some other action, whatever that might be, which was more *effective* within the construct system of the same participant. The reverse was the case for facilitating action. Therefore, an individual's subjective validity claims about what constraining OR facilitating action might mean for them, provided the information necessary for negotiating shared situation definitions about the nature of generic categories or elements of effective action for research.

**Corollary 5** The choice corollary - A person chooses for him/herself that alternative in a dichotomised construct through which he/she anticipates the greater possibility for extension and definition of his/her system.

The choices made by a participant in labeling an activity or circumstances as, for example, *facilitating*, were an indication of what that person meant by effective action within their axes of reference.

**Corollary 6** The range corollary - A construct is convenient for the anticipation of a finite range of events only.

The implication of the range corollary for the present study is this. If contrastive poles CONSTRAINING < - - - > FACILITATING proved to have too limited a range of convenience for the purposes of the study, then this was an opportunity to negotiate more appropriate labels for describing the meaning of effective/ineffective action for research.

**Corollary 7** The experience corollary - a person's construction system varies as he/she successively construes the replications of events

The present study developed a tool for making explicit what participants meant at the time of the weighting process, as effective or ineffective action for research. The tool itself had to be capable of accommodating continual transformation of what counted as effective action for research, because construals of effective action are always in process. While higher order, more abstract levels of the system of constructs tend to remain stable, lower order ones are always being altered or rearranged. It was this process, through which predicting and anticipating could become more effective, that the transformational possibilities of the weighting tool were based. Weightings for given elements could be shown to change over time. Based on the experience corollary, the tool could function as a transformational quality appraisal mechanism.

**Corollary 8** The modulation corollary - The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie.

While a construct itself may not change, it is permeable to the extent that new elements can be considered and then applied. A person whose constructs are impermeable, is unlikely to change or be amenable to change. In the language of Argyris and Schön, those

individuals limited by single-loop learning strategies would have relatively impermeable constructs. The present study was designed with a view to enhancing the range of convenience of the author's construct, constraining and/or facilitating action for research.

**Corollary 9** The fragmentation corollary - a person may successively employ a variety of construction subsystems which are inferentially incompatible with each other.

The present study was deliberately designed to facilitate action by participants that would result in their contrasting personal theories of action about what they value in action for research with their theories-in-use. The fragmentation corollary highlighted the possibility that the weighting process could reveal inferentially incompatible construct systems. While such conflicts could be resolved with the use of higher order constructs, the potential for resolution would depend on whether the participant concerned was employing single loop or double loop learning strategies.

**Corollary 10** The commonality corollary - to the extent that one person employs a construction of experience which is similar to that employed by another, his/her psychological processes are similar to those of the other person.

The construct systems developed by individuals in their daily experience of the world, are systems of understanding that predetermine the meaning and value of action. According to the commonality corollary, the greater the similarity there is between the construct systems of individuals, the more potential there will be for effective communication. The effectiveness of communication is demonstrated in mutual understanding about events. If there is mutual understanding then there is greater likelihood that there will be agreement about the nature of events or circumstances and therefore, effective coordination of action. The iterative hermeneutic processes of the present study served to facilitate such shared understanding. The commonality corollary alone, however, while necessary, is insufficient for agreement about the value of action.

**Corollary 11** The sociality corollary - to the extent that one person construes the construction processes of another, he/she may play a role in a social process involving the other person.

The sociality corollary forms the strongest bridge between the metatheory of Habermas and PCT. The ability of one person to construe the construction processes of another - to *understand* the meaning framework of the other - is the core of communicative action. The weighting process of the present study was developed to enhance the possibility of self understanding, as well as shared understanding about what effective action for research *meant* at the level of practice. In other words, a weighting for a given element of action for research was an objective indicator of effective praxis or theory-in-use.

Kelly's eleven corollaries provided the present study with a detailed reference system for explaining why there may or may not be intersubjective agreement about situation definitions of effective action for research. From a methodological perspective, PCT offered an inquiry tool for arriving at what Habermas described as the 'shared situation definitions' which are necessary for communicative action.<sup>65</sup> The corollaries also suggested why Model I learning systems were those which predominated in everyday action and why communicative action and double loop learning might be so difficult to achieve.

Kelly emphasised, in his theory of personal constructs, that social interaction is *interaction* that takes place 'between different construct systems . . .'<sup>66</sup> Attempting to develop an action theory framework for quality appraisal of higher education research, this study seeks to identify the ways in which individuals involved in research construe action as effective or ineffective. In order to establish what participants identify as effective or ineffective action the study explores the activities and circumstances which

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<sup>65</sup> Habermas, J. (1987) op. cit., p.126.

<sup>66</sup> Adams-Webber, J. R. (1979) op. cit., p.18.

they label as constraining or facilitating action for research across the three domains of action described in Chapter 5 as the organising framework for action researching methodologies. In the present study these domains were: organising action for research (Organisational and Managerial domain); framing understanding of action for research (Conceptual and Theoretical domain); and interacting for the social shaping of research as a sphere of social life (Social and Communicative domain). For example, constraining or facilitating action in the organising of research was expressed by participants variously as management practices, funding practices or human resources practices, categories of action which for them, were the elements<sup>67</sup> of *organising* for research.

PCT served as a reference system in the present study for developing an understanding of what researchers *meant* by effective action for research. If participants experienced action as constraining then this action was, for their purposes, ineffective. On the other hand, if action was facilitating and supportive of participants' research practice, then it was taken to be effective in the context of the particular action systems involved. This was not to say that subjective validity claims about effective action for research cannot be challenged. Rather it was to acknowledge the existence of such validity claims as the basis for negotiating intersubjective agreement about situation definitions *and* an appreciation of the value of action for research. It was this type of information which was used in the present study, for grounding quality appraisal practices in the everyday activities of research practice. If the categories or elements of action that constrained or facilitated research could be articulated and made accessible, then the standards by which researchers discriminated between effective and ineffective action could be made explicit. By describing and sharing these standards for effective action, the present study maps the range of tacit understandings which constituted participants' theories-in-use about action that was valued in the respective contexts of practice.

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<sup>67</sup> Stewart, V., Stewart, A. & Fonda, N. (1981) *Business Applications of Repertory Grid*, McGraw-Hill, England, pp.30-31.



Habermas theorised that learning was the means by which society progressed.<sup>68</sup> However, learning, according to Kelly, is shaped by the ‘specific anticipations’ of individuals who seek always to interpret information in ways that ‘at least at the moment, . . . put [them] in a better position to anticipate future events.’<sup>69</sup> The difficulty is that ‘what is “learned” is not determined directly by [experience] . . . but rather it depends upon specific anticipations, and by implication, the idiosyncratic conceptual framework of the individual.’<sup>70</sup> If the development of a quality appraisal framework built on effective action for research was to be accomplished, it was reflective *transformational* <sup>71</sup> analysis of research practice that was required. For this type of reflective practice to be possible, participants required the support of mechanisms or inquiry tools that facilitated Model II learning behaviours.

The most used analytical tool of PCT is the Role Construct Repertory Grid.<sup>72</sup> The formal Repertory Grid technique involves a method for making explicit those constructs upon which individuals customarily rely. The Grid provides a mechanism for interpreting and predicting social behaviour and for assessing the ways in which the elements of an individual’s construct systems relate, one to another, via constructs. The formal system of Repertory Grid analysis is a quantitative, statistical procedure. For the purposes of the present study, however, it was the corollaries which underpin the procedure, and not the statistical processes or established Grid procedures, that were adopted. The grid in this study provided a format in which data could be placed in such a way that the placement revealed the patterns or meanings in what participants said about their research space.<sup>73</sup>

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<sup>68</sup> Habermas, J., ‘A Reply to My Critics’, in Thompson, J.B. and Held, D. (eds) (1982) op. cit., p.228.

<sup>69</sup> Adams-Webber, J. R. (1979) op. cit., p.14.

<sup>70</sup> Ibid., p. 15.

<sup>71</sup> Sachs, J. (1995) op. cit., p.97.

<sup>72</sup> Bannister, D. & Fransella, F. (1986) op. cit., pp.48-54.

<sup>73</sup> p.55.

The concept of weighting elements in order to indicate the level of importance a particular element held for an individual's action, was adopted as a central design feature for this study. A five-point scale<sup>74</sup> on a grid-type analysis was used to facilitate shared understanding of the importance of activities or situations that, for participants, facilitated or constrained their research activity. The action and circumstances which participants described as constraining or facilitating aspects of their research environment provided the elements<sup>75</sup> that detailed what 'effective' or 'ineffective' action *meant* for them in their daily practice.

Stewart et al. used a mapping metaphor to explain the process and the purpose of choosing elements. They suggested that the best way to understand this process was to:

consider what a surveyor does when he is mapping out a new piece of ground. He starts by selecting a series of key points on that piece of ground - salient features . . . Then when he has his salient features identified, he takes a series of measurements between the features which give him more and more data about the territory until he is ready to draw the complete map.<sup>76</sup>

In the present study, this process was carried out collaboratively between the author and respective participants. The significant features of constraining and facilitating social action for research were mapped in this study using the action researching domains of language, activities and social relations. The 'measurements' in this study were the weightings that individuals attributed to different elements of policy and practice that emerged as important in terms of their research practice. The weightings attributed to action or circumstance were a recorded profile of the participants' subjective validity claims about the value of action for their research practice. The individual's descriptive comments, grouped in the generic categories of elements which emerged and ordered according to the weightings, provided the maps of research 'territories' that were the focus for the study. In creating these *verbal* maps of effective and ineffective action for research, the study identified individual patterns of significance that people attributed to

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<sup>74</sup> Stewart, V., Stewart, A. & Fonda, N. (1981) op. cit., p.37.

<sup>75</sup> Ibid., pp.30-31.

<sup>76</sup> Ibid., p.29.

their everyday experience. It was these patterns of significance (indicated by weightings) that were used as the mechanism for grounding quality appraisal practices in metalearning about the theories-in-use which guide research practice.

## **Soft Systems Methodology - Mapping Meaning and Value in Action Systems**

Soft systems methodology (SSM)<sup>77</sup> is an approach to understanding the patterns of meaningful action that individuals engage in, which complements the construct systems of PCT. Where PCT has as its locus the individual's interconnected meaning-making structures, SSM is oriented more to the interconnected patterns of social action which make up social worlds. In PCT, the focus for reflective analysis is the individual's interpretation or construal of their world. 'In order to make sense of an event, an action or a situation, a person attempts to construe it. S/he erects a structure within which what is observed takes shape and takes on meaning for the individual.'<sup>78</sup>

The spatial mapping or modelling of action *as systems* employed in SSM also provides a useful tool for making explicit taken-for-granted assumptions about the structures and processes which frame the meaning and value of daily practice. Conceptual mapping has been used extensively as a tool for organisational development and management processes. Fiol and Huff<sup>79</sup> explain, using the geographical metaphor of physical maps, how such an activity might be useful to understanding human activity systems.

Maps of the physical world might be thought of as having three important components: (1) they establish a way of designating key physical landmarks; (2) they develop scale and contour conventions that provide information about the relationships among these entities, and (3) they often include markings for routes, or alternative ways to move from one position on the map to another, given the physical terrain.<sup>80</sup>

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<sup>77</sup> See Checkland, P. & Scholes, J. (1990) op. cit.

<sup>78</sup> Dalton, P. & Dunnett, G. (1990) op. cit., p.7.

<sup>79</sup> Fiol, M. C. & Huff, A. S. (1992) op. cit., p.277.

<sup>80</sup> Ibid.

In this study, the conceptual mapping was used with participants as a non-directed focus activity to provide a window into the terrain of their research space. The type of information which participants included, provided a spatial map of the significance of roles, the importance of activities and organisations and the patterns of social relations that defined the activity systems of the research space. Because they were a documented account of an individual's experience of their particular research space, they also provided a medium for critical reflective analysis. The example<sup>81</sup> provided in Appendix 13, gives some indication of the power of this tool for enhancing the transparency of human activity systems. Of particular interest in this conceptual map, were the differences indicated in the strength of connections between the varied functions of the Centre. While there was a lot of activity, communication and connectedness in many instances was relatively weak.

One of the most important advantages of this type of inquiry tool was that participants discovered aspects of their environment which had, until they engaged in the process, remained tacit.<sup>82</sup> Some of the insights that emerged in the present study in the process of conceptual mapping were: strength and direction of linkages; relative importance of functions; communication pathways; organisational arrangements; goals; tensions; and options for action. This process provided an alternative and highly informative view of participant's theories-in-use and, as such, a window into the metalearning underpinning researching capability and effective action for research.

### **Total Quality Management - The Importance of Process Criteria for Quality Appraisal**

Metalearning is process-focused rather than product-oriented. Current research policies in higher education reflect a strong concern with questions of 'quality' but it is 'quality' defined primarily as product. In order to redress this bias, the present study also drew on the philosophy and principles of Total Quality Management (TQM).<sup>83</sup> TQM focuses

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<sup>81</sup> Conceptual Map from Group 5

<sup>82</sup> Fiol, M. C. & Huff, A. S. (1992) *op. cit.*, p.273.

<sup>83</sup> See Imai, M. (1986) *op. cit.*

on process and process improvement and as such provides another perspective of the metalearning for underpinning analyses of effective and productive action. Imai, one of the founding figures of TQM in Japanese industrial cultures, explained that ‘The process-oriented way of thinking bridges the gap between process and result, between ends and means, and between goals and measures, and helps people see the whole picture without bias.’<sup>84</sup> Imai was highly critical of the results-oriented mentality of the West where accountability is judged primarily in terms of ‘the bottom line’.

Imai, proposed that a results-oriented system does not lend itself to building a favourable climate for improvement. ‘There is no internal system in Western management to reward efforts for improvement; instead everyone’s job performance is viewed strictly on the basis of results.’<sup>85</sup> Imai advocated the establishment of process-oriented or ‘P’ criteria for quality appraisal and quality improvement. ‘P’ criteria call for a long term perspective because they serve to enhance the action of people and often involve behavioural change over time. Results-oriented criteria on the other hand are more direct and short-term and usually linked directly to financial reward. This study seeks to balance the results-oriented bias in current quality appraisal frameworks for higher education research, with information that is directly related to effective action for research.

In Total Quality Management, the process of continuous improvement is based on action researching principles. The Plan, Do, Check, Act (PDCA) cycle<sup>86</sup> is very similar in conceptualisation to the Plan, Act, Observe, Reflect process of the action researching spiral.<sup>87</sup> The focus for both is enhanced understanding of practical action and the value of that action for intended purposes. Although TQM advocates the central importance of

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<sup>84</sup> Ibid., p.21.

<sup>85</sup> Ibid., p.29.

<sup>86</sup> National Industry Extension Service (NIES) of the Department of Industry, Technology and Commerce, (1990) *Total Quality Management: NIES TQM ‘How To’ Approach: Guide to Concepts, Principles and Imperatives*, ACT, Australia, pp.59-60.

<sup>87</sup> Kemmis, S. & McTaggart, R. (1988) op. cit., p.11.

‘measurement’, it is measurement that condenses rather than replaces process information. Issues and problems which emerge are ranked on Pareto Charts in order to objectify and communicate the current status of essential processes. Pareto Charts are but one of the ‘tools’ of TQM for establishing the ‘intersubjective agreement about situation definitions’ which Habermas proposes is essential for communicative action. In TQM these tools include Pareto diagrams, cause-and-effect diagrams, histograms, control charts, scatter diagrams, graphs and checksheets.<sup>88</sup> TQM aims, however, not at communicative action as such but at a reduction in *variation*. In industrial production, variation due to either common causes (random causes built into system) or special causes (due to a particular event or individual) is the source of reduced quality.<sup>89</sup> The principle aim therefore of measurement, is to make explicit the nature of these ‘causes’ and to come to some agreement about how to improve the effectiveness of the processes to ensure quality outcomes. The focus is very much process-oriented. Imai, in his book *Kaizen: The Key to Japan’s Competitive Success*, related the example provided by Gerald Nadler, Professor and Chairman of the Industrial and Systems Engineering Department of the University of Southern Carolina.

Productivity (output measure) is a measure, not a reality . . . (using a product measure for poor quality) is like finding out that the room is too cold and looking at the thermometer for the reason. Adjusting the scale on the thermometer itself does not solve the problem. What counts is the effort to improve the situation, such as throwing more logs on the fire . . . in other words, invoking the PDCA cycle.<sup>90</sup>

At the level of practice, output or productivity measures are of little use in questions of quality and quality improvement. Becher<sup>91</sup> takes a particularly strong stance against what he sees as ‘the intrusive managerialism [appearing in bureaucratic structures of

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<sup>88</sup> Imai, M. (1986) op. cit., p.62.

<sup>89</sup> National Industry Extension Service (NIES) of the Department of Industry, Technology and Commerce, (1990) op. cit., p.37.

<sup>90</sup> Imai, M. (1986) op. cit., p. 38.

<sup>91</sup> Becher, T. (1989) op. cit., p.171.

higher education] which seeks to impose a crude form of accountability, based on false assumptions about the nature of intellectual endeavour, and bolstered by insensitive and often spurious 'indicators of performance'. Any adjustment, of course, is a difficult undertaking with the diversity of disciplines and fields of research which constitute academic environments. Dill<sup>92</sup> proposes that at the heart of such an undertaking will be collegial responsibility for academic design. The core technology of higher education is its learning 'systems' and the type of indicators that are relevant to higher education quality judgments are, therefore, those which are generated organically from these learning processes.

For the purposes of the present study, 'measurement' is important. However, it is measurement which condenses rather than replaces effective action for research and which is organically related to practical action. The inquiry process enabled participants with the use of the weighting grid (Table 8.1), to build a profile of effective research practice for their knowledge domain in their specific organisational context. In particular, the weighting grid provided for the identification of tensions (creative and productive or constraining and undermining) as a sub-set of facilitating and constraining actions or circumstances. Tensions provided a valuable analytical tool for objectifying situation definitions that could open the way to transformational quality appraisal practices because tensions represented objectively, the dialectical processes shaping research environments. While the weighting grid of the present study in effect mirrors the principles of TQM because it uses measurement for objectification, it was subjective validity claims rather than production processes, that were the focus. The reflective practice processes that formed the core of the research design were firmly grounded in research practice itself. In this respect, quantitative information generated in the present study was directly related to instances of practical action or the theories-in-use of those involved in daily practice situations.

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<sup>92</sup> Dill, D.D. (1992) *op. cit.*, p.76.

## Effective Action for Research - The Dynamic Quality Alternative

The design of this study was based on collaborative inquiry, which served as the medium for making explicit, profiles of effective action for research across a range of contexts of research practice. The thesis proposes that if the meaning of action for research is not to be distorted by instrumentally and strategically-motivated legitimization and reward systems, then quality appraisal will need to be viewed from a perspective other than that of performance appraisal. Research appraisal will need to be understood as a dynamic learning activity for transforming practice rather than as evaluation using static 'measures' that homogenise the complexity and diversity of research into standardised performance indicators. This is not to say that all appraisal frameworks ought to be framed in terms of the values or interests of researchers, but rather to argue that the synergies between different values frameworks ought to guide merit and worth considerations.

Merit and worth be will necessarily be shaped by the power or privilege of particular stakeholding groups if synergies are not to be the foundation for value judgments about the quality of research practice. In other words, quality judgments would be subordinated to instrumental or strategic interests.<sup>93</sup> Flexibility, transformability and adaptability are values which researchers<sup>94</sup> institutions<sup>95</sup> and government<sup>96</sup> alike, hold in terms of their expectations for research. The thesis argues therefore, that it would be advantageous for key stakeholding groups to be able to employ a quality appraisal methodology which is grounded in a substantive knowledge base that defines effective action for research. The following chapter makes explicit the processes by which such a quality appraisal methodology was developed and refined in the present study.

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<sup>93</sup> Habermas, J. (1984) *op. cit.*, pp. 285-286.

<sup>94</sup> Higher Education Council of the National Board of Employment, Education and Training (1992a), *op. cit.*, p.41.

<sup>95</sup> Macquarie University 1991 Research Report, Macquarie University Publications, NSW, pp.8-10.

<sup>96</sup> See Australian Research Council (ARC) (1994). *op. cit.*



## CHAPTER 9

### UNFOLDING THE EMERGENT DESIGN

This chapter provides an overview of the emergent design of alternative quality appraisal processes in retrospect. In this overview, the process steps undertaken in order to develop an alternative quality appraisal framework grounded in effective action for research, are explained and justified. In other words, through hermeneutic inquiry processes, the present study demonstrates what quality appraisal practices would involve if they were to be grounded in the activities of research as a sphere of social life. The inquiry is hermeneutic and therefore *emergent*<sup>1</sup>. It is *hermeneutic* because it builds progressively towards an interpretive account of the categories of action that are valued by researchers in quality research practice. It is *emergent* because the patterns of significance which emerge during each phase of data collection and analysis provide the basis for successive inquiry activities. In an emergent design it cannot be decided *a priori* where boundaries ought to be drawn, what process steps will be required nor what specific questions should be asked. This information is revealed progressively in the iterative dialogue processes that shape the inquiry design.

While tentative plans for the different phases of the present inquiry provided a pathway to follow and a sequence of possible methodological steps (Appendix 14), these plans were reviewed continually, according to the patterns of significance that emerged in the dialogue processes. The emergent design of the inquiry is presented, therefore, as a narrative account of the evolution of process steps involved in generating a tool based on metalearning for quality appraisal of higher education research. The forces that shaped that tool in the making are demonstrated in four phases of the emergent design.

#### **Retrospective Overview of Hermeneutic Inquiry - A Four Phase Process**

The following overview of inquiry phases provides a framework for the subsequent detailed description of the methodological steps, as well as an indication of the outcomes

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<sup>1</sup> Guba, E.G. & Lincoln (1989) op. cit, pp.179-180.

of each phase. The emergent design of the study meant that those taking part in the processes were engaged in an action researching approach<sup>2</sup> as they worked towards a shared understanding of effective/ineffective action for research at two stages. The first stage including Phases 1 and 2, involved practical reflective action<sup>3</sup> with a focus on the social action of research practice itself. The second stage included Phases 3 and 4, and involved action of a critical reflective nature<sup>4</sup> with a focus on the development of a quality appraisal tool that was grounded in metalearning about effective action for research practice.

### **Phase 1 - Practical Reflection for Participants**

In Phase 1, participants from a number of research collectives or groups reflected, individually, on the patterns of action that structured their research space. It was these patterns of action which were recorded as their *practical reflections* on their research space. A tentative model of research environments, based on the three interdependent aspects of social life used to structure an action researching inquiry,<sup>5</sup> was introduced to participants as the initial focus for interaction. The model, demonstrated in Figure 9.1, was used firstly, as a tool for explaining diagrammatically how the author understood the concept of 'research space' and secondly, as a way of focussing the practical reflective discussion activities. The original labels for the three aspects of social life used in the model (Figure 9.1) were derived specifically from reconnaissance activities (Organisational and Managerial) and the work of Becher<sup>6</sup> (Conceptual and Theoretical and Social and Communicative) in his study of epistemological and social aspects of knowledge communities. For the purposes of the present inquiry, these three aspects of social action were referred to as 'domains' of action.

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<sup>2</sup> See Kemmis, S. & McTaggart (1989) op. cit.

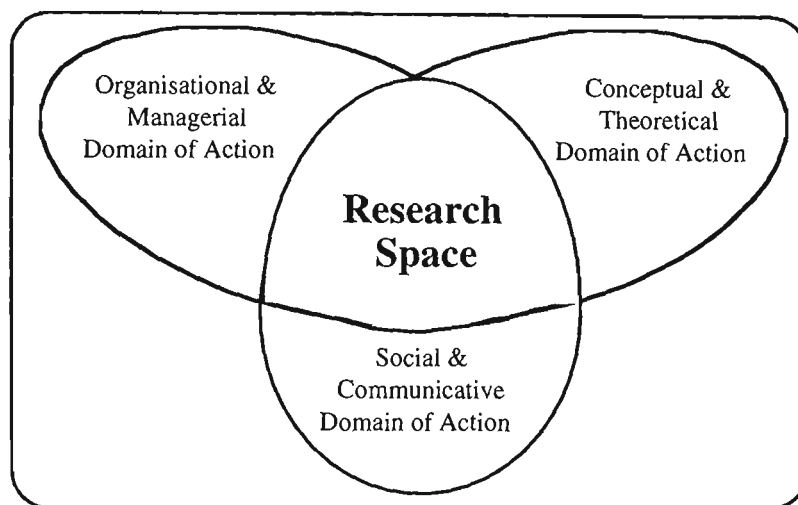
<sup>3</sup> Smyth, J. (1986) op. cit., p.19.

<sup>4</sup> Ibid., p.18.

<sup>5</sup> Kemmis, S. & McTaggart (1988) op. cit., pp. 34-35.

<sup>6</sup> Becher, T. (1989) op. cit., p.1.

**Figure 9.1 : Author's Conceptual Map of Research Space**



Smyth<sup>7</sup> explains that practical reflection is a type of reflection which serves to enhance understanding about the assumptions that underpin practical activities. Actions are viewed, in practical reflection, as being inextricably linked to particular interests or value commitments, and it is these value commitments that can be illuminated in the processes of reflective inquiry. The objects of practical reflection in Phase 1, were the interests being served, for participants, by the language, activities and social relations of research practice in their respective research groups or collectives. In other words, Phase 1 provided in-depth information, in the form of records of discussion and conceptual maps, through which participants and author clarified the conditions that were understood to be shaping the meaning and value of their action for research. Chart 9.1 summarises the processes involved and outcomes generated in Phase 1. In Chart 9.1, as is the case in subsequent charts, each of the four phases of the inquiry process is further subdivided into :

- Activities involved
- Data generated
- Data analysis
- Credibility and dependability measures
- Progress in development of quality appraisal tool

<sup>7</sup> Smyth, J. (1986) op. cit., p.19.

**Chart 9.1 : Phase 1- Practical Reflection for Participants**

Activity	Through dialogue processes, the mapping, by the author and participants, of organisational, conceptual and social action that structured the research space for respective participants and feedback of same to participants.
Data Generated	A substantive database for reflective inquiry.
Data Analysis	Through immersion in the data generated, development of mental maps, on the part of the author, of each participant’s research space.
Credibility and Dependability Measures	Member checking/negotiation of shared (between author and participant) situation definitions of each participant’s research space, as recorded in record of discussion.
Progress in development of appraisal tool	Shared understanding of constraining/facilitating action for research in each participant’s research space.

**Phase 2 - Practical Reflection for Author**

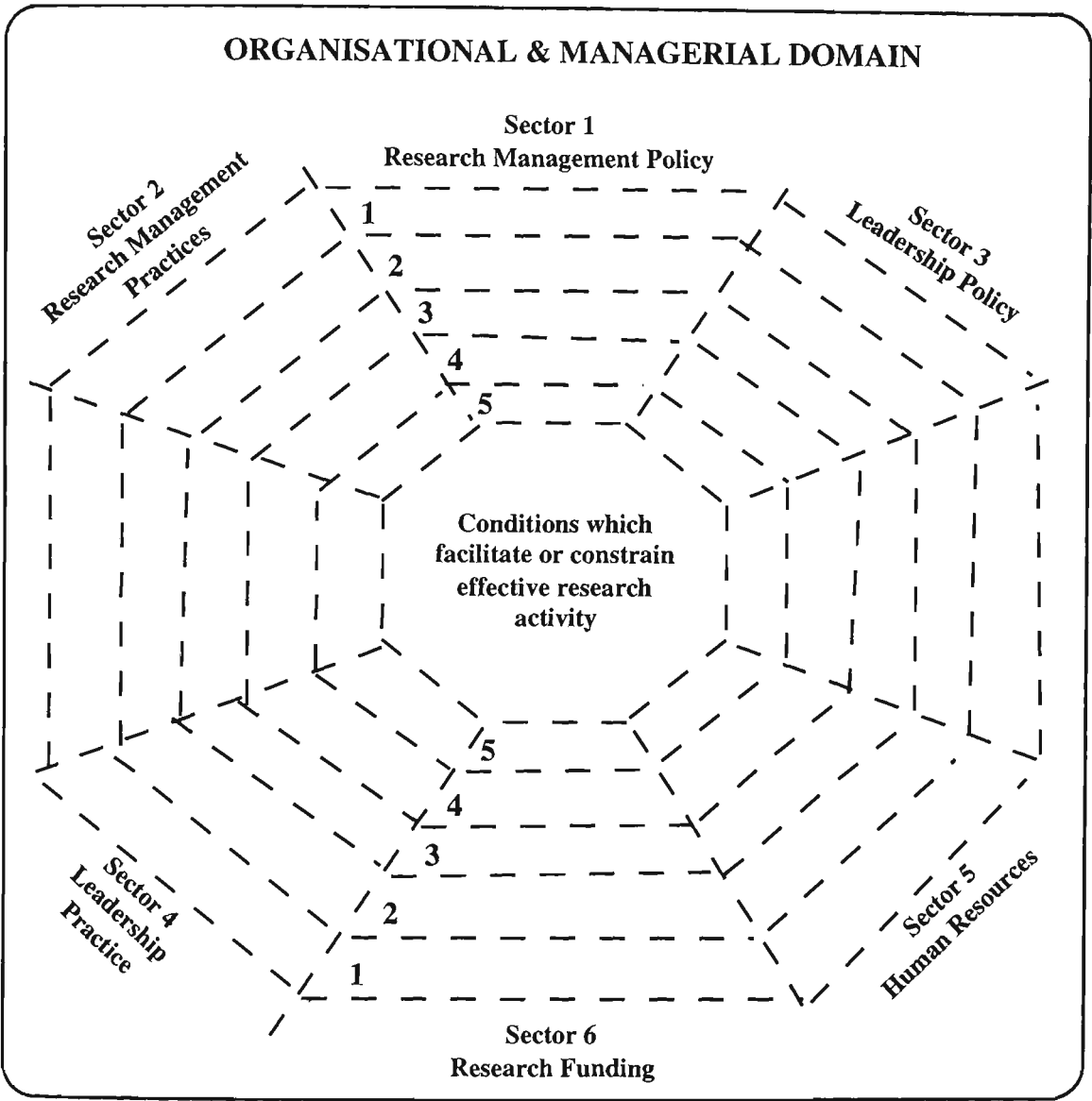
In Phase 2, the author developed the first iteration of the tool for grounding appraisal of action for research, in the day to day activities of researchers. This grounding was made possible by transforming the description of daily activities recorded in Phase 1 of the inquiry, into itemised statements about the respective participant’s research space. Based on Geertz’s<sup>8</sup> concept of ‘webs of significance’, the overall patterns of action, which for each participant constituted their particular research space, were conceptualised as interconnected ‘webs’ of significant action. For the purposes of analysis, the research space was framed in terms of three interconnected ‘webs’ which represented the different domains of action.

Using the underlying metaphor of the ‘web’ of significant action, the domains of action constituting the different sections of the web were referred to as *sectors*. Figure 9.2,

<sup>8</sup> Geertz, C. (1975) op. cit., pp.3-30.

illustrates how the researcher used the web metaphor to conceptualise the generic categories of action that emerged in the participant’s descriptions of the actions and circumstances shaping their research space.

**Figure 9.2 :** *‘Web’ of Action in the Organisational & Managerial Domain of Research Practice*



The tentative sector names were selected because they described the generic categories of activities that emerged during the author’s analysis of the records of discussion generated in Phase 1. The sector names were generated and confirmed by the author, using the inductive, constant comparative method of data analysis<sup>9</sup> and the ethnographic software program NUDist (Non-numerical Unstructured Data Indexing, Searching and

<sup>9</sup> Glaser, B. & Strauss, A. (1967) *The discovery of grounded theory*, Aldine, Chicago, pp. 101-116.

Theorising). The term *sector* designated like elements of [effective - ineffective] action for research in each of the three respective domains of action. Those activities or circumstances having the greatest impact on facilitation or constraint of effective research practice were thought of as being located spatially at the centre of the web. Alternatively, those having the least impact were considered to be located spatially, on the outer perimeter of the web. Each statement could be weighted according to the impact of the activity or circumstances on the research space which was the centre of the web.

While the web itself proved to be an effective metaphor for generating a protocol, it was of limited use for feedback purposes at a practical data management level. However, the concept was used to structure a database format on Microsoft Works which proved to be an easily organised and efficient format for the activities in Phase 3. Chart 9.2 summarises the processes undertaken and outcomes generated in Phase 2.

**Chart 9.2 : Phase 2 - Practical Reflection for The Author**

Activity
<div>a. Itemisation of participant’s statements;</div> <div>b. Sorting of statements into three different domains of action; and</div> <div>c. Development of provisional generic categories of action within each domain.</div>
Data Generated
Tentative generic categories of action labels and design of the grid layout for feedback to participants re tentative generic categories and allocation of statements to respective categories.
Data Analysis
Through constant comparative method of data analysis, development of tentative labels for respective sectors of action which cover the range of action for research described by participants.
Credibility and Dependability Measures
Use of constant comparative method of data analysis and member checking re generic category labels for sectors.
Progress in Development of Appraisal Tool
<div>a. Development of an action-oriented language for describing the full range of action for research practice identified by participants.</div> <div>b. Design of the grid format for feedback and dialogue purposes.</div>

**Phase 3 - Critical Reflection on Research Practice**

In order to establish explicit patterns of significance in terms of action for research, participants were asked to weight each activity or set of circumstances described, according to the level of importance for *their* effective research practice. In other words, participants were asked to critically reflect on the action they had described at the level of practice or theory-in-use. Critical analysis or *critical reflection* such as that undertaken in Phase 3, is necessary, according to Smyth,<sup>10</sup> if individuals are to be freed from the distortive effects of institutionalised values and action systems which may be impacting on their social action.

The weighting process was facilitated by the use of dual-sided grid demonstrated in Table 9.1. The dual-sided grid consisted of two five-point scales, with one side representing constraint and the other side facilitation. The weighting protocol was organised according to the rationale and principles of Personal Construct Psychology, in which elements of a person's construct system are given a weighting, or rated, in relation to a particular construct.<sup>11</sup> In the case of the present study, the construct was CONSTRAINING < - - - > FACILITATING and the elements were the statements as representative instances of the generic categories of action labelled as sectors. The sector labels had been developed by clustering similar types of activity. The grid provided a structure in which participants could objectify (by weighting) their subjective validity claims about the value of activities within a generic category of action for research, at the level of research practice. The statement listed in the following example of the grid had been categorised, by the participant concerned, as a sector 3 type of action, that being an example of Leadership Policy action.

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<sup>10</sup> Smyth, J. (1986) op. cit., p.18.

<sup>11</sup> Stewart, V., Stewart, A. & Fonda, N. (1981) op. cit., pp. 37-45.

**Table 9.1 :Value of Action in Research Practice Weighting Grid**

Domain	No	Comments	C/F	Constraining						Facilitating					Sect
				5	4	3	2	1	0	1	2	3	4	5	
Org. & Manag.	7	While there is an overall aim for the research program, everyone contributes as much as they can to achieving its goals	F											5	3

The first column (Domain), indicated the domain of action which the comment had been placed in following the preliminary analysis by the researcher. The second column (No), indicated the numerical reference for the comment which was retained throughout the entire process so that participants could always refer back to previous feedback if required. The third column (Comments) contained the participant’s comments, itemised as statements, for weighting purposes. The fourth column (C/F), was provided so that the participant could indicate whether the particular activity or circumstances described was constraining OR facilitating for them in their research practice. The fifth (Constraining) and seventh (Facilitating) columns respectively were used by the participant to record the weighting which they attributed to the activity or circumstances in terms of its importance for their effective research practice. If the activities or circumstances were considered to be constraining, then the weightings on the *constraining* side of the grid were used. On the other hand, if activities or circumstances were considered facilitating, then the *facilitating* side of the grid was used in a similar manner. A weighting of [1] indicated that the activities or circumstances had very little importance for their effective research practice. A weighting of [5] indicated that the activities or circumstances were of great importance to their effective research.

In some instances, there were both constraining *and* facilitating aspects involved in the activity or circumstances described in the statement. In such cases, the participant used



the weightings on both sides of the grid and joined the two recorded weightings to indicate a tension in the research space. The nature of such tensions has been discussed previously in Chapter 8. The 'Zero' column (column 6) was used by participants to indicate that the activity or circumstances were [at the time of weighting] irrelevant in terms of their effective research practice. Column 8 (Sect) was used to designate the generic category or sector of activity in which the statement was located.

The *weightings* which participants attributed to actions or circumstances they had described, provided a mental model<sup>12</sup> of the language (Conceptual and Theoretical), activities (Organisational and Managerial) and social relations (Social and Communicative), which they valued in terms of moral-practical action for effective research practice. Mental models according to Senge,<sup>13</sup> who builds on the work of Agyris in the study of organisational learning,<sup>14</sup> are the individual's 'internal pictures of how the world works'. Models provide 'images, assumptions and stories' that explain the social relations of everyday action. They are the theories-in-use which comprise the individual's stock of tacit knowledge. In the case of the present study, the participant's statements gave a descriptive account of the types of action that, in their experience, covered the full range of action for research.

The weighting process provided participants with a tool for, in Habermasian<sup>15</sup> theory of social action, 'objectivating' the type of action which they had found to be effective. In other words, the weighting process facilitated the type of learning that is required for

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<sup>12</sup> Senge, P. M. (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization*, Century Business, London, Ch. 10.

<sup>13</sup> Ibid., p.175.

<sup>14</sup> See Agyris, C. (1992) *op. cit.*

<sup>15</sup> Habermas, J. (1982) A Reply to My Critics. In Thompson, J.B. and Held, D. (eds) *op. cit.*, p.228.

articulating moral-practical insight and ‘objectifying’ metalearning about the nature and the value of action for research. The following chart, Chart 9.3 summarises the processes undertaken and outcomes generated during Phase 3.

**Chart 9.3 : Phase 3 - Critical Reflection for Participants**

<p>Activity</p> <ul style="list-style-type: none"> <li>a. Member checking, negotiation, correction of sector labels as shared understanding of range of action for research, and of the author’s placement of statements within labelled sectors.</li> <li>b. Weighting, by respective participants, of each of their statements re importance for constraining or facilitating their effective action for research.</li> <li>c. Incorporation of modifications and weightings into database.</li> </ul>
<p>Data Generated</p> <ul style="list-style-type: none"> <li>a. An action-oriented framework/language for describing the range of action for research practice.</li> <li>b. Objectified profile of subjective validity claims about the value of action for research or theories-in-use, that make explicit metalearning about the value of action for research.</li> <li>c. Enhancements to weighting protocol.</li> </ul>
<p>Data Analysis</p> <ul style="list-style-type: none"> <li>a. Critical reflective analysis of efficacy of language to describe range of action for research.</li> <li>b. Critical reflective analysis by participants of value of action for research at the level of practice.</li> </ul>
<p>Credibility and Dependability Measures</p> <ul style="list-style-type: none"> <li>a. Member checking/negotiation of sector labels, as shared understanding of range of action for research and of author’s placement of statements within labelled sectors.</li> <li>b. Peer debriefing between author and respective participants re value of action for research, in dialogue processes during weighting process.</li> </ul>
<p>Progress in Development of Appraisal Tool</p> <ul style="list-style-type: none"> <li>a. Application and development of weighting grid as a tool for objectifying subjective validity claims about the value of action for research.</li> <li>b. Inclusion of ‘tensions’ as an important design feature.</li> </ul>

## Phase 4 - Critical Reflection on the Inquiry Process Itself

Phase 4 built on the work of the previous phase in a three-part, information-generating process. In this fourth and final phase, the sorted, weighted comments were transferred to Excel database for analysis, feedback and critical reflective analysis. Through the use of the Excel program, the author was able to provide, as feedback for participants, an organised mental map of their theories-in-use for effective research practice. More importantly, with the modifications to the weighting protocol, these mental maps made clearly visible the dynamic strains and tensions that were present in the research space.

In Phase 3, the value of action for research practice had been problematised. In Phase 4, the action researching process used in the development of a quality appraisal tool, was itself problematised<sup>16</sup> or brought into question. In the three-step process of Phase 4, the first activity involved sorting of comments according to the weightings that participants had attributed. This first step provided profiles of facilitating/ constraining action for each of the participants concerned. The second step in Phase 4 was the generation, by the author, of an evaluative summary about the quality of the respective participant's research environments. The data used to complete the evaluative summary included, the sorted, weighted statements, and a graph of the total weightings for each of the respective *sectors* of activity (See Figures 9.4, 9.5 and 9.6 in this chapter). The weightings for individual statements were aggregated to give a weighting for the particular category of action, according to the level of facilitation or constraint experienced by the person concerned. These evaluative summaries were returned to participants in the form of Project Feedback booklets. Chart 9.4 summarises the processes and outcomes generated in Phase 4.

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<sup>16</sup> McTaggart, R. (1991) op. cit., p.47.

**Chart 9.4 : Phase 4 - Critical Reflection for Author and Participants**

<p>Activity</p> <ol style="list-style-type: none"> <li>Development by author (using weighted, descriptive statements in combination with aggregated weighting profiles) of evaluative accounts of effective/ineffective action for research, as feedback to respective participants from appraisal process.</li> <li>Using appraisal process outcomes from author in the form of Project Feedback Booklets, development by participants of a critical reflective review of the efficacy of the appraisal process.</li> </ol>
<p>Data Generated</p> <ol style="list-style-type: none"> <li>Individual profiles of facilitating/constraining action for research.</li> <li>Individual - Group comparison of profiles of facilitating/constraining action</li> <li>Group domain profiles summary of facilitating/constraining action</li> <li>Across group profile summary of facilitating/constraining action</li> <li>Participant-generated critical reflective analyses of the efficacy of the quality appraisal tool for quality appraisal purposes.</li> </ol>
<p>Data Analysis</p> <ol style="list-style-type: none"> <li>Graphing of the aggregated weighting profiles for each sector and calculation of the group average.</li> <li>Author's critical reflective appraisal of the value of action for research</li> <li>Participant's critical reflective appraisal of the efficacy of the tool for quality appraisal purposes.</li> </ol>
<p>Credibility and Dependability Measures</p> <ol style="list-style-type: none"> <li>Prolonged engagement<sup>17</sup> (65 interview/discussion sessions over a two year period)</li> <li>Congruence between the author's evaluative summary generated from qualitative and quantitative profile information and the participant's actual experience of the organisational, social and conceptual action that structures their research space at the level of practice. Congruence was determined by responses to Guba and Lincoln's Authenticity Criteria.<sup>18</sup></li> </ol>
<p>Progress in Development of Appraisal Tool</p> <ol style="list-style-type: none"> <li>Adaptations by participants of tool for internal benchmarking, development of standards for quality research grounded in research practice and use of the tool as a transformational quality appraisal mechanism.</li> <li>Confirmation of the efficacy of the tool for quality appraisal purposes, the development of protocol for use of the tool in appraisal processes and identification of the limitations of the tool.</li> </ol>

<sup>17</sup> Guba, E.G. & Lincoln, Y. S. (1989) op. cit., p. 237.

<sup>18</sup> Ibid., pp.245-251.

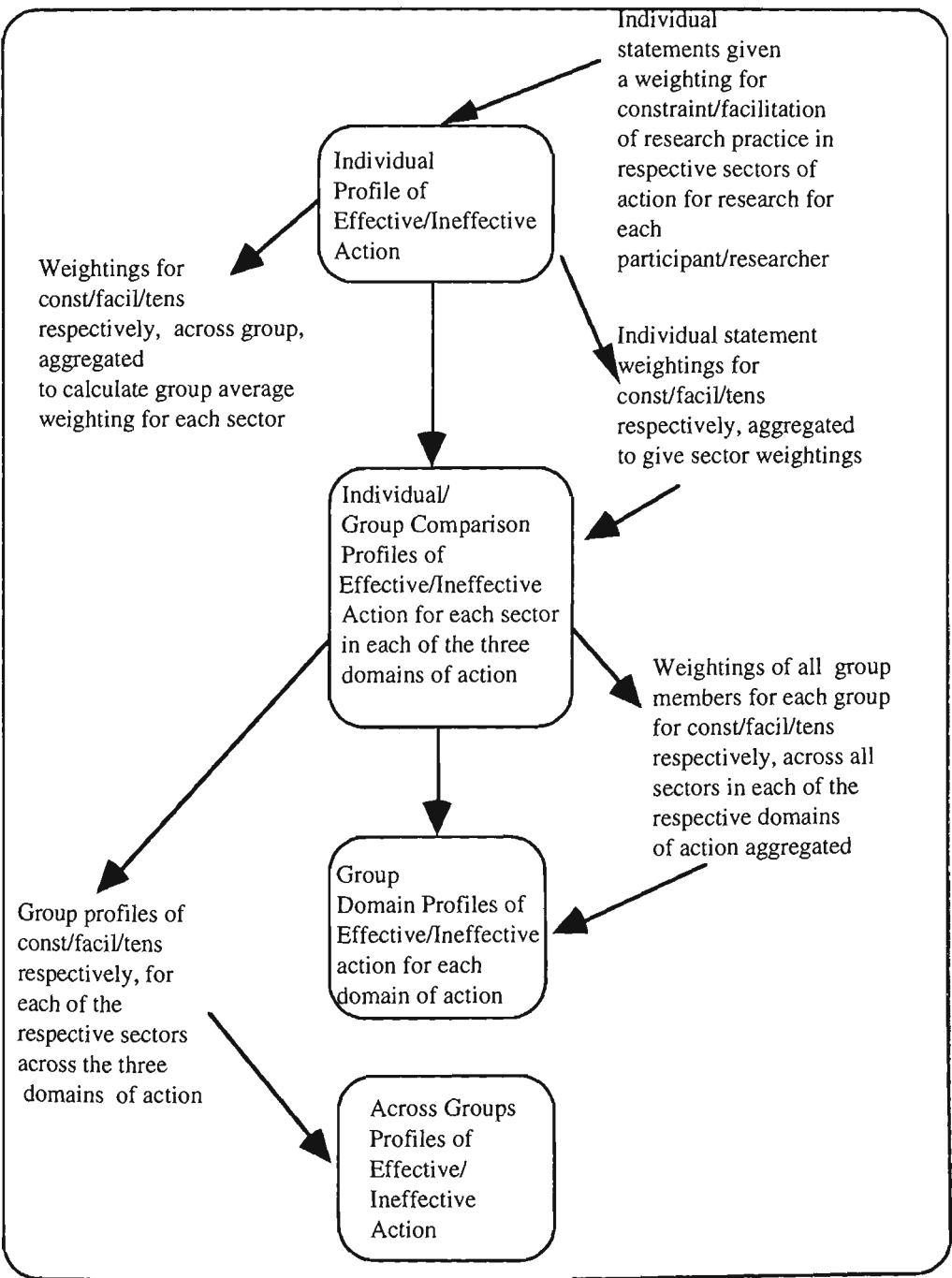
While the original tentative inquiry design (Appendix 14) was used for negotiating process steps, the planned group activities never eventuated. To begin with, the envisaged group activities, given the extremely limited time participating researchers could afford to devote to reflective practice, meant that any plans for group activities were unworkable. Secondly, it became apparent that without a fully-developed tool for reflective practice and organisational learning, such a project would be highly constrained. As the study evolved, therefore, it focussed increasingly on the development of a tool for reflective practice, using the processes involved to shape the tool itself.

For the purposes of the present study, the weightings established in Phase 3 of the study provided the basis for an alternative that could take the place of group interaction. The following sequence of aggregation demonstrates how this alternative to group interaction was achieved.

1. For each participant in the group, the individual statement weightings for the level of constraint, facilitation and tension, for each sector in each domain of action, were aggregated.
2. These aggregated sector weightings for individuals were then further aggregated to give a total weighting for the level of constraint, facilitation and tension for each sector.
3. A group average for constraint, facilitation and tension was calculated by aggregating respective sector weightings for constraint, facilitation and tension for the entire group.
4. Finally, all weightings across the group for constraint, facilitation and tension in the Organisational, Conceptual and Social domains of action respectively, were aggregated in order to provide an overview of the quality of the research environment for the group concerned.

The use of a group average enabled a *de facto* group sharing of the information, without affecting confidentiality agreements. The third and fourth levels of aggregation enabled across group comparisons of levels of constraint, facilitation and tension in research practice within the institution. The weighting for a sector of activity, such as management practices, could therefore, provide an indication of the importance of this element of organisational action for effective research practice, across the diversity of research activities within the institution. The successive levels of aggregation are represented in Figure 9.3.

**Figure 9.3 :** *Successive Levels of Aggregation in the Quality Appraisal Tool*



The insights and understandings developed with successive analyses and feedback activities with different groups, meant that the *Project Feedback Booklets* provided to participants were modified and improved over time. The final version of the Project Feedback Booklets included the following information on the cover :

**Chart 9.5 : *Project Feedback Booklet Cover***

This evaluative account of the conditions that facilitate or constrain your research, tests the efficacy of the process we have engaged in for understanding and appraising the quality of your research environment. The account represents a ‘slice-in-time’ and provides an evaluation of the environment from the perspective of your role and what you are trying to achieve. It may, however, provide the information necessary for you to appraise not only the research environment at that point in time but also your current circumstances.

I have included in this Project Feedback, the original interview and debriefing statements that you made, sorted into the three different domains and sectors of activity within each of these domains.

- The three key domains of action are Organisational, Conceptual and Social.
- The Sectors of Activity within each of the three domains are subsections of the domains of action.
- The statements you made appear in the domain and sub-sector which we confirmed as appropriate, during the debriefing and weighting process.
- The weightings which you attributed to each of your statements are included in the table as a quantitative profile of effective/ineffective action for research.
- The evaluative summary is based on these sorted, weighted statements.

The level of impact on facilitation of research, for the actions described in each sector, has been determined by aggregating the individual weightings that you attributed to the statements for the respective sector. This aggregate weighting has been compared to the group average of aggregated weightings for the sector in order to provide an ‘Individual - Group Comparison’.

The third and final activity in Phase 4 involved the forwarding of a questionnaire to respective participants. Each participant was invited to provide the author with feedback about his/her critical reflections on the efficacy of the appraisal processes that s/he had been involved in. These critical reflective analyses provided important insights into both the potential and the limitations of the tool for quality appraisal purposes

## **DETAILED PROCESS STEPS OF EMERGENT DESIGN**

The first of the two stages of inquiry in the present study was made up of Phases 1 and 2 which constituted the practical reflective action of author and participants.

### **PHASE 1 - PRACTICAL REFLECTION**

Phase 1 began with an information generating cycle which would provide the resources or core data for the reflective practice activities of the present study. The Phase 1 process consisted of map-building activities which served to describe the territory of research practice as experienced by participants. These maps consisted of documented descriptive accounts providing participants with a resource for reflective practice.

#### **Phase 1 - Activities Involved**

The activities undertaken in Phase 1 involved a two-step process. The first step in Phase 1, required the securing of a negotiated agreement with respective research groups or collectives concerning their involvement in the study. This process of negotiation was facilitated by a letter of introduction from the DVC Research (Appendix 11) and a personal approach from the researcher. Arranging times to meet with researchers, however, proved to be a considerable challenge. *Time* is a researcher's most precious commodity and reflective practice takes both commitment and time so a period of seven



months elapsed before all initial interviews were completed. Five research groups were involved in the study with an average of four researchers in each group. In all, over a two year period, sixty-five interview/discussion/debriefing sessions with core participants took place (Appendix 15). The Research Management Unit was included in the study from initial discussions through to completion. Initial interviews with the final research group were conducted six months after the corresponding interviews with the first group were carried out. The duration of these sessions ranged between forty minutes, and in some exceptional cases, three hours. Because participants were discussing concerns and issues of great personal importance, it was often the case that sessions extended, at the request of the participant, beyond the planned forty-five minutes. This was particularly so with sessions in which participants were weighting their comments to indicate the level of importance for their research practice. With this type of intense interaction, the need for peer debriefing<sup>19</sup> was essential. While peer debriefing was not available within the author's own organisational context, a colleague from another university provided confidential, ongoing peer debriefing throughout the study. Having no personal stake in the study, this colleague was able to give supportive, but 'disinterested' feedback on the emergent inquiry design and process steps.

The first interaction with respective participants involved an interview/discussion session which also included conceptual mapping<sup>20</sup> of the perceived research space for each participant. Open-ended focus questions (Appendix 16) together with the claims, concerns and issues introduced by successive participants about facilitating or constraining action for research, shaped and guided the discussion in these sessions.

### **Phase 1 - Data Generated**

Following the initial discussions, a record of each participant's construal of their research space, in the form of typed interviews and conceptual maps, was prepared by the author

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<sup>19</sup> Ibid., p.237.

<sup>20</sup> Fiol, M. C. & Huff, A S. (1992) *op. cit.*, p.277.

for feedback and member checking purposes. The documented interview record, together with accompanying maps redrawn using MacDraw Pro software, were returned to the individual concerned for reflection, confirmation and, where necessary, clarification. This process is known as *member checking* in which the researcher's interpretation of the participant's constructions regarding their research space were presented to the person concerned for verification. Following member checking, the amended records were then entered into a qualitative database for the first level of analysis in the next phase. This qualitative database provided the substantive data for reflective inquiry purposes.

### **Phase 1 - Data Analysis**

Phase 1 analysis involved the building, by the author, of a mental map of each participant researcher's respective research space. An important aspect of this 'map building' was the formulation of questions about the record of interview. Questions arose where there was ambiguity or uncertainty about the meaning of particular comments and these questions could be raised in subsequent dialogue sessions. The author's own reflections following each set of interactions were also recorded in a journal for later reference in tracking progressive subjectivity<sup>21</sup> on the part of the author.

### **Phase 1 - Credibility and Dependability Measures**

Member checking, the second step in Phase 1 is, according to Guba and Lincoln,<sup>22</sup> the single most crucial technique for establishing credibility in this inquiry paradigm. The member checking process in the first information-generating cycle of Phase 1, established the efficacy of the author's descriptive records of research activity as a resource for reflective practice. Interview records were printed on horizontally-oriented, A4 paper pages so that participants had ample room to add comments or make corrections. The

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<sup>21</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., p.238.

<sup>22</sup> Ibid., pp. 238-239.

provision of an obvious space for correction or amendment was an important demonstration by the author, that participants were to play an active role in ensuring the integrity of recorded data. Researchers were asked to amend or clarify recorded statements where they felt this was necessary and these amendments were then added to the database (Appendix 17).

### **Phase 1 - Progress in Development of Quality Appraisal Tool**

The practical reflective action of Phase 1 enabled the researcher, in dialogue with respective participants, to develop a record of shared understanding about effective and ineffective action for research. Practical reflective action on the part of the researcher and participants was used to map the territory of theories of action for research across the respective research collectives or groups.

### **PHASE 2 - HERMENEUTIC ANALYSIS**

In Phase 2 the author carried out an extended hermeneutic analysis of the recorded interview/discussion data using the *constant comparative method*<sup>23</sup> of data analysis that underpins grounded theory research. The aim of this analytical process was to develop a generic category framework that would incorporate all participants' elements of CONSTRAINING < - - - > FACILITATING action for research e.g. Constraining Research Management Practices < - - - > Facilitating Research Management Practices. Generic categories of elements<sup>24</sup> such as *research management practices*, were developed by clustering groups of similar properties<sup>25</sup> which emerged in the data i.e. sub-groups such as; 'decision-making activities', 'prioritising activities', 'utilisation of human resources', 'establishing time-frames' were collapsed into one generic category of Research Management Policies. The sub-group titles became part of the generic category

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<sup>23</sup> Glaser, B. & Strauss, A. (1967) op. cit., pp.101-116.

<sup>24</sup> Stewart, V., Stewart, A. & Fonda, N. (1981) op. cit., pp.30-31.

<sup>25</sup> Strauss, A. & Corbin, J. (1990) op. cit., p. 61.

definition. The generic categories of action for research provided a documented account of what each participant *meant* by *effective* or *ineffective* action for research in the respective domains of action. If the action or circumstances that had been described constrained participants in their role, then this was taken to be a subjective validity claim, that for the participant concerned, it was ineffective action. Alternatively, if the action or circumstances described facilitated them in their role, this was taken as a subjective validity claim that the action was, for them, effective at the level of research practice.

## Phase 2 - Activities Involved

Provisional indexing of the amended interviews was completed by the author, using the qualitative database NUDist. Based on the web metaphor described previously, the provisional generic categories<sup>26</sup> of action which emerged were labelled Sectors and the descriptive statements within those sectors, properties of the respective Sector. Following the provisional indexing and sorting, the record of statements was transferred to Microsoft Works database format for Phase 2 (See Table 9.1). A meeting for feedback, discussion and critical reflection, was arranged with the participants involved.

## Phase 2 - Data Analysis

This provisional indexing activity served to establish the tentative generic categories of elements<sup>27</sup> of language, activities and social relations that counted as significant for researchers in their respective spheres of social action. NUDist is a powerful software program that mirrors the processes of pattern recognition and concept-building which take place in the constant comparative method<sup>28</sup> of data analysis. Analyses using the constant comparative method involve iterative processes in which the record of interview is read many times. Each repeated reading serves to identify better, the patterns or categories of information that emerge. The *reading*, however, is a special type of reading in which

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<sup>26</sup> Ibid.

<sup>27</sup> Stewart, V., Stewart, A. & Fonda, N. (1981) op. cit., pp.30-31.

<sup>28</sup> Glaser, B., & Strauss, A. (1967) op. cit., pp.101-116.

systematic comparisons of a hermeneutic nature,<sup>29</sup> are made between each of the statements and:

- The context of each statement
- The rest of the text in the record
- Other interview records from the same research context
- The institutional context
- The policy context
- The broader economic and cultural systems which are echoed in the statement.

For the purposes of the present study, the three action researching domains of language, activities and social relations discussed previously, provided the conceptual structure for examining the central phenomenon of the inquiry: *facilitating or constraining action for research practice*. As Strauss and Corbin note<sup>30</sup>, ‘. . . a decision as to the central phenomenon is crucial to the study. The central phenomenon is at the heart of the integration [or theory-building] process.’ It is this central phenomenon that steers category-building. With the indexing of each successive comment, inclusion/exclusion rules were articulated as a method for generating category definitions from the data. With NUDist, these ‘rules’ were dated and recorded as the inquiry analyses progressed to deeper levels. Cumulative and increasingly refined definitions, or ‘mapping rules’, for allocation of comments to a particular category were recorded so that eventually all comments were indexed.

To a large extent, the indexing process is dependent upon the tacit knowledge or ‘enhanced theoretical sensitivity’<sup>31</sup> of the person analysing the information as he or she builds a conceptual map of the patterns of significance in the data. The key to enhanced

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<sup>29</sup> Guba, E.G. & Lincoln, Y. S. (1989) op. cit., pp. 149-155.

<sup>30</sup> Strauss, A. & Corbin, J. (1990) op. cit., pp.123-124.

<sup>31</sup> Ibid., Ch. 6.

theoretical sensitivity is capacity of the researcher to generate questions ‘to open up the data : think of potential categories, their properties and their dimensions.’<sup>32</sup> The initial Domain and Sector ‘mapping rules’ which emerged in the first analyses using the NUDist database are contained in Appendix 22. With each successive cycle, these indexing categories were refined and elaborated. Over subsequent feedback and analyses cycles, the structure of generic categories for the present study became increasingly stable.

## **Phase 2 - Data Generated**

The ‘mapping rules’ or sector definitions, which had been compiled in the indexing process, were recorded for member checking by each participant as they reviewed their statements sorted according to these categories. Each record of interview had been itemised into statements and sorted according to the provisional generic categories of sectors emerging in the indexing process. The sorted statements were entered into a Microsoft Works database. The use of Works was necessary for the construction of an appropriate grid on which participants could weight each of the descriptive statements (elements) in terms of its importance for facilitation or constraint of their own research practice. While the grid format became a central feature of the inquiry design, the power of the grid as a tool for quality appraisal, began to emerge only in Phase 3.

The inquiry could have concluded at this point, with a descriptive account of social action involved in research practice. However, such an account, grounded as it would have been in purely practical reflection, was insufficient for enabling participants to clarify the conditions which may have been distorting communication or shared understanding about the meaning and value of action for research. It was the realisation that reflective practice alone was insufficient for quality appraisal purposes, that signposted the need for critical reflective action as the next phase of the inquiry processes.

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<sup>32</sup> Ibid., p.77.

## **Phase 2 - Credibility and Dependability Measures**

With the flexibility of NUDist, provisional indexing was tested by collecting all the comments for a particular category together and reviewing them for consistency or 'look-alikeness'. The ease with which category could be collapsed or re-named according to new themes or insights which emerged, meant that category definitions or 'mapping rules' could be easily tested and either confirmed or disconfirmed. The value of NUDist in this type of inductive, theory-building data analysis process, was that all the provisional categories could be retained, thus providing an 'audit trail' attached to each statement when it was printed out in order to confirm the category. As theoretical sensitivity was enhanced, a more differentiated and stable indexing system was generated with each successive reading of the data. Sub-categories were, in some cases collapsed, renamed, shifted to a different element, or deemed to be redundant and so deleted. For example, information about institutional context, culture and structure was moved from the Organisational and Managerial Domain to that of the Social and Communicative Domain because it became apparent during initial member checking with participants, that the importance of institutional structures was not their role in organisation per se, but the *power* exerted by these structures over social relations and communication.

The qualitative analysis of data on NUDist, however, was only the first step in the process. The most important step was member checking of these analyses with respective participants, in the first discussions in Phase 3. With initial interview and debriefing sessions staggered over a seven month period, the earlier steps in Phases 1 and 2 were continually refined, as insights regarding the category definitions were fed into the analyses and feedback cycles.

## **Phase 2 - Progress in Development of Quality Appraisal Tool**

By sharing understandings about research practice, both researcher and participants engaged in developing a language to describe the categories of action that could

encompass the activities of research practice. It was this language, modified in the iterative processes of the study, which eventually provided a means for explaining, describing and justifying quality research environments.

### **PHASE 3 - CRITICAL REFLECTION ON RESEARCH PRACTICE**

The Phase 2 process had consisted of interpretive activities, on the part of the author using the constant comparative method of data analysis to generate generic categories of action for research. In Phase 3, participants engaged firstly, in reflective practice with regard to the generic categories generated by the author, and secondly, in critical reflective action, attributing weightings to their own recorded statements. The weighting which they attributed to an element of action for research, in the form of a descriptive statement, was an indication as to the importance of that particular action or set of circumstances for constraining or facilitating their research practice.

#### **Phase 3 - Activities Involved**

The sorted record of interview, presented in grid format, was shared with each of the respective participants, in the first instance, for the purposes of member checking the efficacy of the generic categories. The efficacy of the categories, category definitions and the appropriateness of the categories for the statements which had been assigned to them, were discussed and suggested modifications recorded. One of the difficulties when spoken language was recorded and represented as itemised written text, however, was that in some cases the intended meaning of a statement had been lost or misrepresented. Sometimes participants felt that more formal language was required for written statements and so they made minor alterations. If participants felt their intended meaning had been changed, they modified or extended comments to more accurately represent the original intent of their statement. The more common adjustment was additional information for clarification purposes, the splitting of one statement into two, or the combining of two or more statements where there was repetition. There were also circumstances in which participants, on reading the statement in the context of the category definitions, found that the statement they had made belonged in a different category. For example, the comment: 'There is the expectation that researchers and other project participants will always be





The weightings, when applied by participants, provided their evaluative account of the dimensions of effective - ineffective action for research within their particular research space. This weighting process was originally developed because extended observation of research processes to describe the participants' theories-in-use, about what activities were actually valued, was inappropriate for the purposes of the present study. Given that, according to Agyris,<sup>33</sup> most organisations operate as Model I or single-loop learning systems, simple observation would be unlikely anyway, to illuminate participants' theories-in-use regarding the value of action for research. By itemising 'action' statements, the action itself had been taken out of the stream of 'taken-for-granted' experience that characterises single-loop learning and, in Schütz's terminology, rendered problematical.<sup>34</sup> By involving themselves in the weighting process, participants were able to demonstrate what, at the level of practice:

- Counted as valid evidence of quality research practice;
- Was accepted as legitimate order of social relations for research; and
- Illustrated the nature of legitimation and reward systems that did actually serve to sustain and enhance researching their capabilities and academic identity.

The value of the weighting process as a tool for reflective practice far exceeded original expectations. Not only did the weighting process map the value of activities at the level of practice or theory-in-use, but it also presented the possibility for making explicit the nature of dynamic tensions in the research space. It was the frustration that participants experienced in trying to decide whether a comment represented *either* facilitating OR constraining action that led to this insight. In some cases, the author's construct of 'facilitating' or 'constraining' action proved to be inadequate for conveying the participant's experiences of their research environment in relation to a particular statement.

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<sup>33</sup> Agyris, C., Putnam, R. & McLean Smith, D. (1985) op. cit., pp.93-96.

<sup>34</sup> Schutz, A. (1967) op. cit., p.74.

By insisting that there were both positive *and* negative aspects to a particular action, they generated the need for some way of representing a tension. A demonstration of tension weightings is provided in Table 9.3.

**Table 9.3 : Value of Action For Research Practice Weighting Grid**

Domain	No	Comments	C/F	Constraining					0	Facilitating					Sect
				5	4	3	2	1		1	2	3	4	5	
Org. & Manag.	25	The group has grown so much that we now need a formal structure to indicate who is responsible to whom	C/F			3	<	-	-	-	>	3			1
Concept & Theoret.	26	The need to publish research findings is an everpresent pressure	C/F		4	<	-	-	-	>	2				5
Social & Commu	20	While PhD research is a solitary activity, research students are supported financially to attend conferences	C/F				2	<	-	-	-	>	4		4

### Phase 3 - Data Analysis

Amended, weighted comments were transferred to Excel spreadsheets for a more sophisticated sorting and analyses than had taken place in Phase 2 of the study. A new grid was designed specifically for this purpose. The column labels for the amended *Quality Research Environment Profile* are presented in Table 9.4. Columns 1 to 4 from the original weighting grid ie. Domain, No, Comments and C/F, were retained. The Sector column was moved towards the centre of the profile and four new columns added to replace the original dual-sided, five point scales. In this modified grid, the sixth column (C/Wt) listed the sorted profile of weightings for 'constraint' and the seventh column (F/Wt), the sorted profile of weightings for facilitation. A new column (Level of Tens) was added, in which the level of tension, indicated by the difference between the weighting for constraint and the weighting for facilitation, was recorded. The final,

additional column was labelled (Tens Bias Pos/Neg). In this column, the spreadsheet capabilities were used to calculate the degree of bias in the directional trend of the tension towards either the constraining or facilitating poles of the construct CONSTRAINING < - - > FACILITATING, and used as the focus for reflection.

All statements in Table 9.4 have been selected from Sector 1 (Research Management Policy Sector) of the Organisational and Managerial domain of action. Once again, statements have been included because they demonstrate a range of weighting possibilities and have been taken from different participant records.

**Table 9.4 : Quality Research Environment Profile**

Domain	Original Number	Indicator of type of activity or activity patterns	Constr / Facil	Sector of activity	C Wt	F Wt	Level of Tens	Tens Bias Pos/ Neg
Organis & Man	18	While researcher is involved in intellectual property and secrecy agreements in the course of his work, this is something he has not allowed to become an issue.	C	1	1			
Organis & Man	2	There are special conditions for academic work, for generating knowledge, but the managers don't see them.	C	1	4			
Organis & Man	12	The megacentre infrastructures tend to become ossified	C	1	5		0	0
Organis & Man	19	Intellectual property and secrecy agreements are respected but with an understanding that secrecy and confidentiality won't unduly restrict publications.	F	1		2		
Organis & Man	14	The Advisory Board for research partnership includes all the bench-type people to keep the Management team honest.	F	1		4		

**Table 9.4** *Continued*

Organis & Man	23	The leader brings in particular types of personalities and then lets them go for it	F	1		5	0	0
Organis & Man	15	There is no structure in the research group to indicate who is responsible to whom	C/F	1	3	3	5	0
Organis & Man	3	We appointed someone from the commercial/industrial sector for management and promotion but there were great cultural differences	C/F	1	4	1	4	-3
Organis & Man	1	Tenure is a problem because tenured staff can sometimes abuse the system and remain unproductive	C/F	1	2	4	5	2

In order to clarify for participants, their theories-in-use about the value of action for research, their itemised statements were sorted, using the Profile table layout, according to:

- Whether the activity in the particular sector was constraining or facilitating (Const/Facil) and sequential Sectors (Sector of Activity);
- The weightings which had been attributed (C/Wt & F/Wt); and
- Tensions (the final sub-set of each Sector).

With the design of the grid, the use of Excel had expanded significantly the analytical and feedback possibilities. Formulae were developed which allowed tensions to be sorted as a separate sub-section of weightings according to:

- The level of tension (Level of tension), this being the sum of the ‘weighting spaces’ between the constraining and facilitating weightings for the tension, including the zero column, therefore a tension with [Constraining 3] and [Facilitating 5] would have a Level of tension of [7]. It was necessary to count the zero column as one in these calculations so that a tension between [Constraining 1] and [Facilitating1] could be represented.

- Whether the tension was positive or negative (Tens Bias Pos/Neg). The positive or negative bias to a tension was also calculated with another formula so that participants could see if they considered tensions at the level of theory-in-use, either negative and undermining or creative and productive.

### **Phase 3 - Data Generated**

Phase 3 generated a substantive database of profiles of effective - ineffective action for research. These profiles consisted of mental models of each participant's construal of effective - ineffective action for research across the different sectors of the three core domains of action - organisational, conceptual and social. These profiles were in the form of weighted, sorted, qualitative statements. Furthermore, a sub-section of these profiles contained a map of the dynamic tensions within the research space for respective participants. The nature of these tensions, in terms of their impact on the quality of respective research environments, was indicated by the degree of tension bias towards either the constraining or the facilitating pole.

The present study proposes that it is the type of information generated in these quality research environment profiles that could be used by participants, as a platform for redressing the inadequacies of output-oriented, performance-based data, currently used as the basis for legitimation and reward of research practice.

### **Phase 3 - Credibility and Dependability Measures**

An essential component of Phase 2 was member checking with regard to the efficacy of category or sector names generated by the author using the constant comparative method of data analysis. Member checking and debriefing regarding the placement of each of the

comments in the respective sectors in Phase 3 was also vital. The weighting grid enabled participant researchers to make explicit their subjective validity claims about the value of action or circumstances for their effective research practice. In so doing, they were empowered to establish standards for research that were grounded in the moral-practical action of everyday research practice. Using these standards, participant researchers could judge the effectiveness of action with respect to their role and responsibilities in research as a sphere of social life.

### **Phase 3 Progress in Development of Quality Appraisal Tool**

Category labels and definitions for effective - ineffective action for research were confirmed or modified according to feedback from participants in the Phase 3 dialogue processes. The *structured dialogue process* in the form of the *weighting grid*, provided participants with a tool for tapping into their tacit knowledge or *metalearning* about the meaning and value of action for research. Using the weighting grid, participants could both explore and illuminate the value of the activities they had identified for facilitating their own research practice. When the weighted statements were sorted, the qualitative descriptions of action in combination with the weightings, provided feedback which made explicit the results of participant's critical reflective action. The profiles provided evidence of the patterns of significance that constituted, for participants, their theory-in-use for effective research practice in each generic category of action. The information generated in the weighting process also provided a resource, which, if utilised by researchers, could empower them to engage in double-loop learning. In Habermasian<sup>35</sup> terms, such a resource would be essential if participants were to enhance the possibility of intersubjective agreement about the action situation in which they were involved.

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<sup>35</sup> Habermas, J. (1982) A Reply to My Critics. In Thompson, J.B. and Held, D. (eds) op. cit., p.264.

Recognition of both the existence and the importance of tensions, as a sub-set of facilitation and constraints was one of the key insights which emerged in Phase 3. It was found, during the Phase 3 process, that tensions, whether creative and productive or constraining and undermining, could provide a window into the gap between theory of action and theory-in-use, between what participants said they valued in terms of action for research and what was actually valued in their everyday research practice. Their theories of action in the form of belief statements, or policy prescriptions, represented the tendency towards institutionalisation of language, activities and social relations in their research space. While institutionalisation could protect valued patterns of action, it could also prevent the emergence of more effective action that was required for changing circumstances.<sup>36</sup> As a result of this insight regarding the usefulness of tensions as a component of the weighting grid, the phenomena under investigation in the inquiry were extended to include *tensions*. In Phase 4, the focus for the study became, *facilitating, constraining or tension-inducing action in research practice*.

#### PHASE 4 - CRITICAL REFLECTION ON THE INQUIRY PROCESS

Phase 4 involved critical reflective practice on the part of both author and participants. In the case of the author, evaluative accounts of research practice were generated using the qualitative comments in combination with graphs of the weightings profiles, for those involved in the study (See previous Table 9.4). Participants, on the other hand, provided an evaluative account of their critical reflections on the inquiry process itself, as a tool for quality appraisal.

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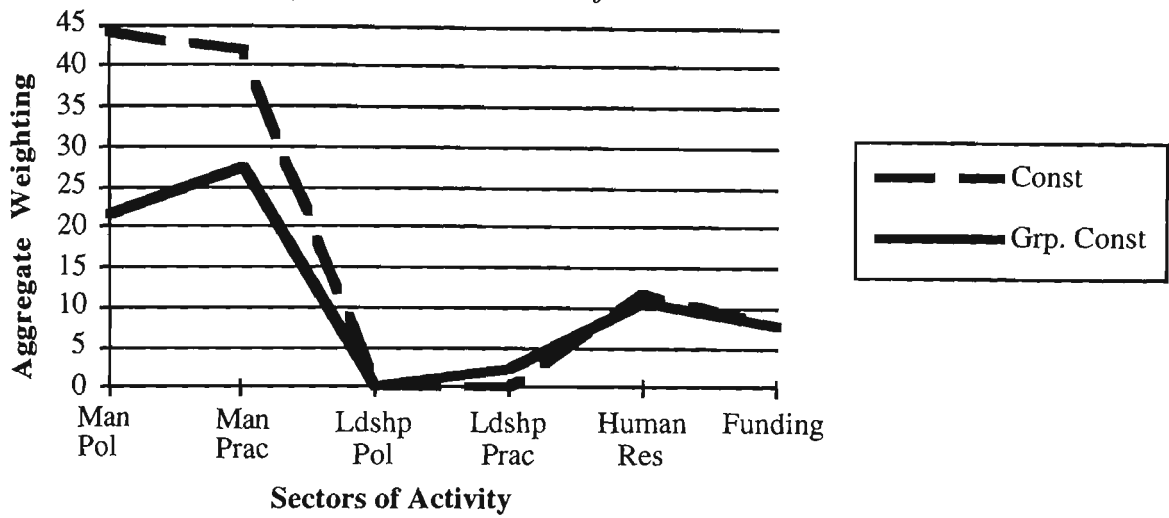
<sup>36</sup> McTaggart, R. (1991) op. cit., p.78



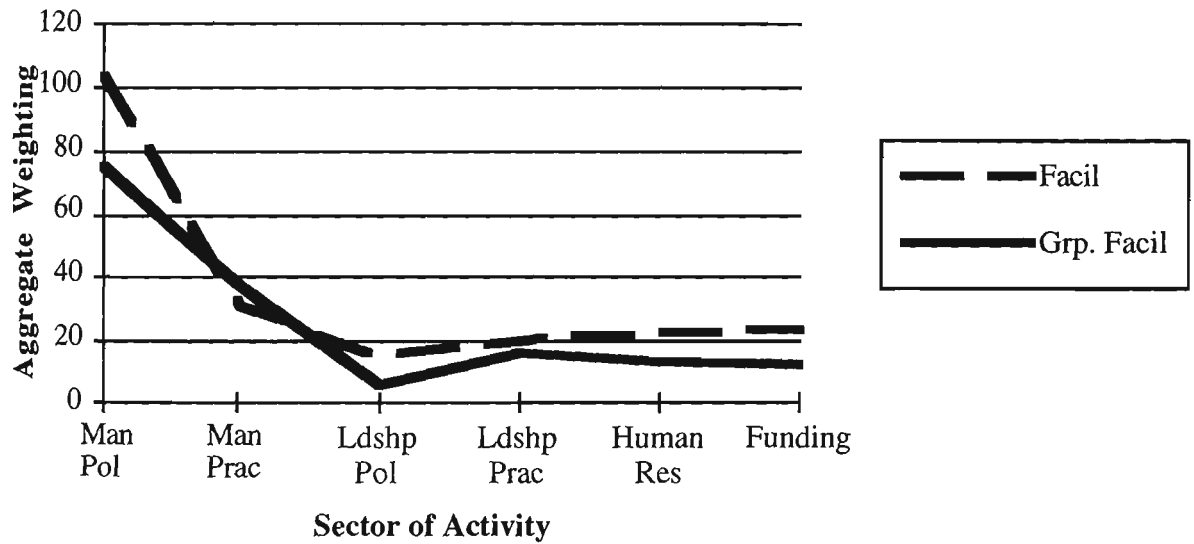
## Phase 4 - Activities Involved

Critical reflective action on the part of the author was the first activity in the Phase 4 process. The weightings that participants attributed to statements, located each statement listed in the respective sectors, along a continuum of effective - ineffective action for research. The profiles of weightings across different sectors of activity for the three domains of action, organisational, conceptual and social, provided a mental map of effective - ineffective action for research. This 'map' was made more readily comprehensible with an accompanying summary graph. One of the central problems in Phase 4 was the choice of an appropriate type of graph for representing the patterns of facilitation, constraint and tension in the research environment. The choice of graphical representation was a crucial one because of the need for a symbolic representation of constraints, facilitation and tensions that could effectively *condense* rather than *replace* the moral-practical understandings of participants about the quality of their research environment, into a simple profile. The concerns and issues involved in development of an appropriate format for graphing individual statement and aggregate sector weightings, are included in Appendix 18. The final format selected was one which included three graphs for each participant for each domain, one presenting a profile of constraints, one a profile of facilitation and the other a profile of tensions (Figures 9.4, 9.5 and 9.6 following). With the constraints, facilitation and tensions separated out, each of the individual profiles of weightings could be compared with a group average of aggregated weightings, for each sector, of each of the three domains of action. Using the qualitative information in statements, together with the individual statement weightings and aggregated sector weighting profiles demonstrated in Figures 9.4, 9.5 and 9.6, the author compiled for each participant, an evaluative summary of the quality of their research environment for their effective research practice.

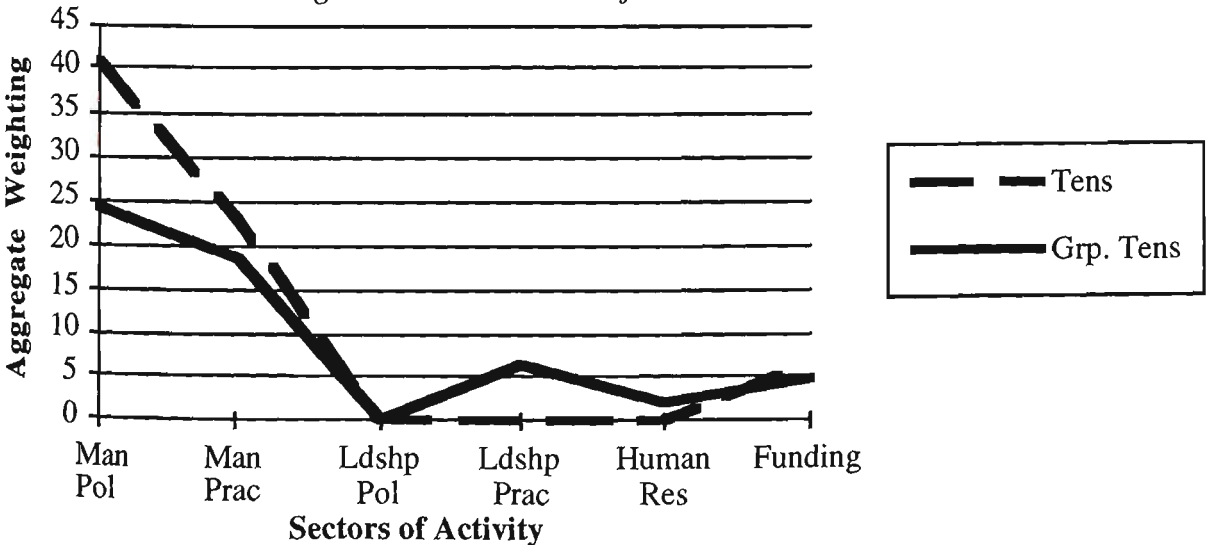
**Figure 9.4 :** *Aggregate Sector Weighting for Constraint in the Organisational Domain of Action*



**Figure 9.5 :** *Aggregate Sector Weighting for Facilitation in the Organisational Domain of Action*



**Figure 9.6 :** *Aggregate Sector Weighting for Tension in the Organisational Domain of Action*



The nature of the data generated in the Phase 3 critical reflection by participants was such that the graphed profiles could not be interpreted or evaluated in isolation from the qualitative comments. Because the data consisted of subjective validity claims about both the meaning (qualitative) and value (quantitative) of action for research, statements and weightings were necessarily linked for analysis and reporting purposes.

The author's evaluative accounts were generated as feedback to participants in the form of *Project Feedback Summaries*. Using the weightings, coupled with the descriptive statements, these summaries documented the author's construal of the quality of the respective participant's research environments. While the original intention had been for these summaries to be used by individual participants as a resource for group discussions aimed at organisational learning, this plan had to be modified. The alternative to group discussion processes, the use of an average aggregate weighting for each sector, provided a range of options for a more comprehensive feedback summary. By aggregating the weightings in each sector, the group average could be used to reveal the importance of the respective sectors for facilitation or constraint of research across the group. Respective participants could then compare their profile of weightings for each of the sectors against the group average.

While this option raised certain problems, it did have two important advantages. Firstly, it was evident that time for group debriefing was simply not available with participant researchers' tight schedules for research, teaching and other professional commitments. A group average of aggregated weightings served to raise awareness of significant areas of constraint, facilitation or tension within a group, without the confidentiality of individual participants being breached. The problem that emerged for the individual participant with the use of a group average, however, was that in the absence of group discussion and debriefing, the qualitative data of other participants was unavailable to them. However, this also proved to be useful because the absence of specific information provided motivation for individuals to follow-up, with their colleagues, any noticeable areas of facilitation, constraint or tension that were either different from their own or of

concern or interest to them personally. Secondly, it was possible using the group average, for the author to feed back to individuals the patterns of constraint, facilitation and tension across a group, by identifying category themes or similar properties in elements of action, without breaking confidentiality. While group debriefing and discussion would be necessary to make effective use of this information by testing out subjective validity claims, the evaluative summary of the group average at least provided some stimulus for discussion to take place.

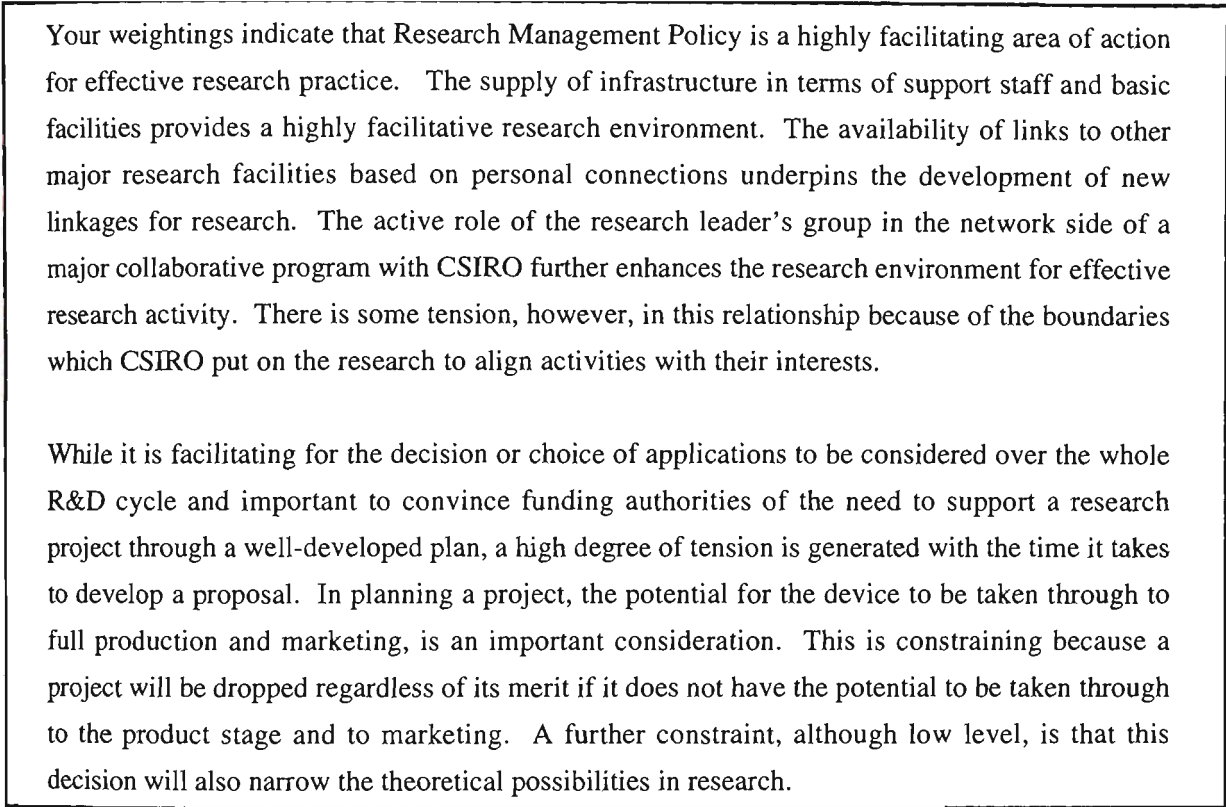
Project feedback summaries were forwarded to each participant/researcher both for their information, and as a resource for further action if they wished to address, with their colleagues, any of the claims, concerns and issues that had emerged. For the purposes of the present study, however, this feedback cycle was also an important step in judging the efficacy of the inquiry process. Each participant was invited to critically reflect on the process they had engaged in and to forward their evaluation of the reflective appraisal processes to the researcher. A questionnaire (Appendix 19) was included in the feedback package specifically for this purpose. In the questionnaire, participants were also asked to provide demographic details although only minimal use was made of the majority of this information because it proved to be irrelevant for the purposes of the present study. Unfortunately, the time that elapsed between the commencement of the study and the conclusion meant that the number of participants responding to the final request for information was reduced. It was evident that unless the author approached participants in person regarding their project feedback summary responses, that with pressure of time, such responses were unlikely to be completed. However, all personal approaches to participants, bar one, resulted in their forwarding critical reflective responses to the author. A report on these responses is included in a subsequent chapter.

#### **Phase 4 - Data Analysis**

The first of the sets of data generated for feedback purposes in Phase 4 were individual *Quality Research Environment Profiles*. These were the original weighted, sorted statements illustrated previously, in Table 9.4. Information from the quality research

environment profile was used as the basis for the author’s evaluative summaries for each participant. By combining the detail of descriptive statements with the participant researchers’ weightings for respective statements, it was possible to construct a highly detailed evaluative account of the quality of the research environment for the individual concerned. An example of this detailed evaluation is presented in Figure 9.7.

**Figure 9.7 :** *Sample of Project Feedback Evaluative Summary*

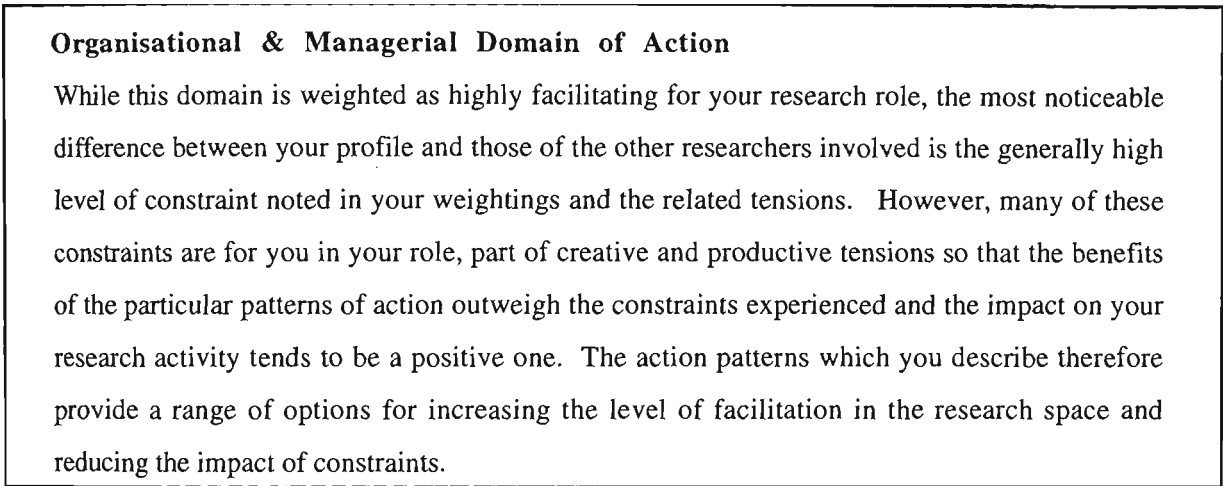


While these evaluative summaries were the core of the feedback to participants, the possibilities for graphing the weightings profiles were also an important development.

The second set of data generated for the Project Feedback Summary was an *Individual - Group Comparison*. A protocol was established for judging the importance of the difference between the profile of the individual and that of the group. A difference between the individual’s weightings for a Sector and the group average of aggregate Sector weightings was considered notable and deserving of comment about constraint or facilitation, given a certain ratio. For example, if the individual’s aggregate Sector weightings were double those of the group average or alternatively less than half the

group average, comment was warranted. In the case of tensions, this ratio was 1.5 in excess of or below the group average. The constant comparative method of data analysis, checking qualitative comments against the results using this protocol, confirmed the efficacy of the ratio as a rough indicator of significance. However, judicious use of this protocol was required in instances where only one participant had markedly different weighting profile, thus distorting the group average. An example of an individual - group comparison of weighting profiles is provided in Figure 9.8.

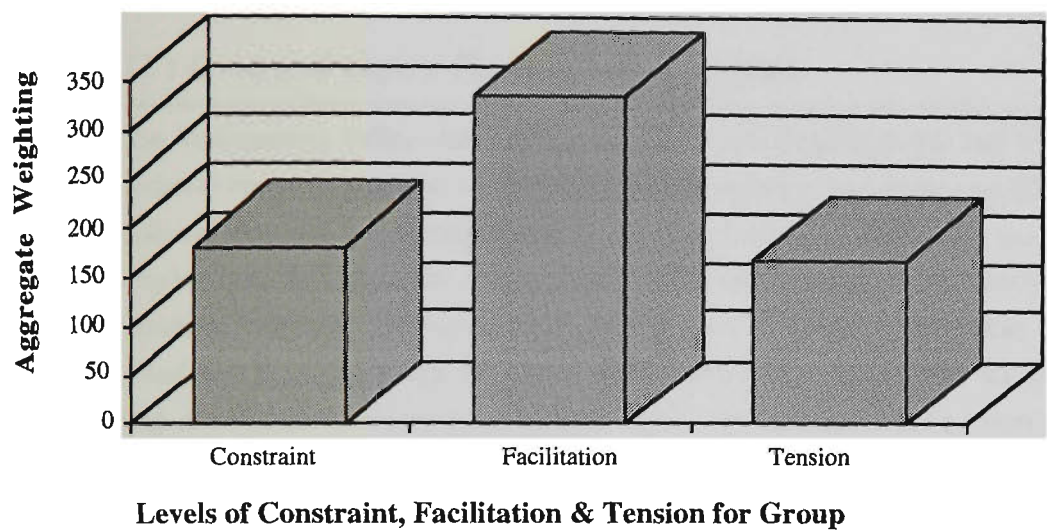
**Figure 9.8 : Individual - Group Profiles Comparison**



Ultimately, the efficacy of this evaluative strategy could be judged by the extent to which the account confirmed the subjective validity claims of the participant concerned regarding their experience of the research environment.

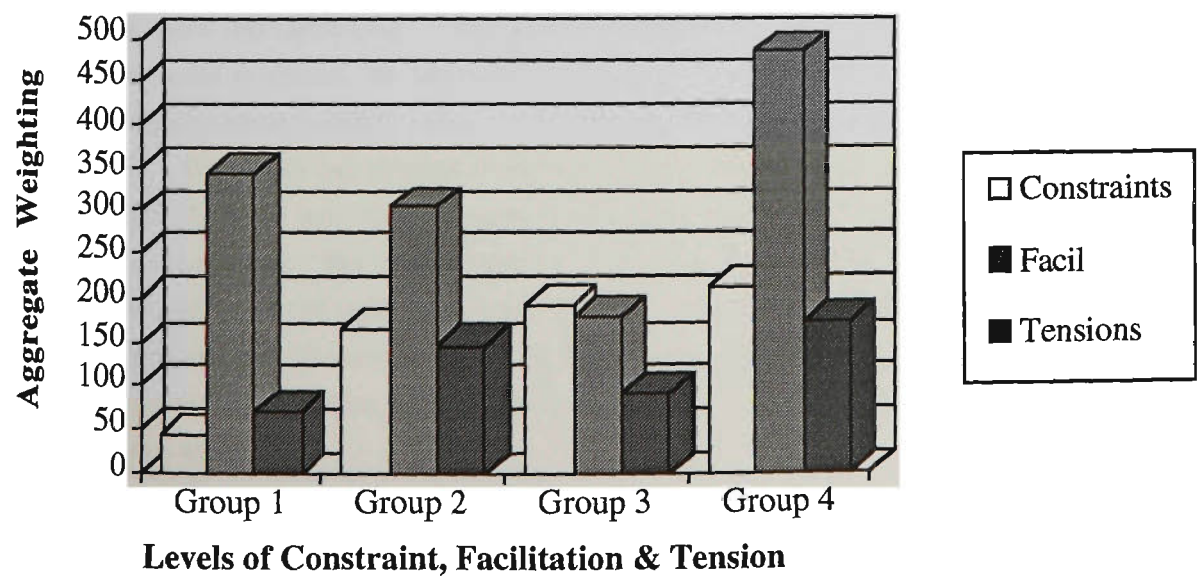
The third set of data generated for the Project Feedback Summary was a *Group Profile of Aggregate Weightings for Domains* showing levels of constraint, facilitation and tension. These profiles were calculated by aggregating the weightings for all statements listed as constraints, facilitation or tensions, for all group members, for each of the three domains. The resulting graph is presented in Figure 9.9.

**Figure 9.9 :** *Group Profile of Aggregate Weightings for Constraint, Facilitation and Tension in the Organisational and Managerial Domain of Action*



From the in-depth analyses of the individual qualitative data it was evident that there were marked differences amongst the groups in terms of levels of constraint, facilitation and tension. In some groups, the levels of tension were much higher than for others. Figure 9.10 indicates the variation across groups in levels of constraint, facilitation and tension.

**Figure 9.10 :** *Across Group Aggregate Weightings for Levels of Constraint, Facilitation and Tension in the Organisational Domain*





The descriptive comments from groups with high levels of constraint and unproductive tension, such as Group 3, conveyed a picture of action that appeared to be ‘centre-fleeing’ and tending towards disintegration.<sup>37</sup> An evaluative summary of one such group is provided in Figure 9.11.

**Figure 9.11 : *Contested Centre-Fleeing Group Dynamics***

In both the Management Policy and Funding sectors of the Organisational and Managerial domain, concern about the potential for research activities and directions being overwhelmed by related political demands is a strong theme for most researchers. The subtle but complex relationship between the importance of recognising and accommodating individual interests, the need for academic autonomy and the emerging requirements for a more formalised management structure, had been highlighted with the growth of numbers and functions within the Unit. This relationship is particularly evident in statements across the Research Management Practices sector. Further, the need for administrative support staff to facilitate quality research activity is a consistent theme in the Human Resources Sector statements for all researchers who participated in this study. One of the most interesting aspects of the Organisational and Managerial profile is the relative lack of importance attributed by all researchers to the Leadership Policy and Practice sectors.

Alternatively, others in which there were high levels of facilitation and creative tension, such as group 4, appeared to be ‘centre-seeking’ and cohesive. An example of an evaluative summary of a cohesive group is provided in Figure 9.12.

**Figure 9.12 : *Cohesive Centre-Seeking Group Dynamics***

In the Conceptual and Theoretical domain of action, the Knowledge Type sector is seen as an important area of facilitation for a number of reasons. These reasons all involve to some extent, the facilitation offered by collaborative research with access to a wide range of interests, knowledge, skills and capabilities. Furthermore, when this wide range of capabilities is focused on environmental problems, the increased potential for generation of creative solutions has meant that the research is highly valued by the clients, organisations and authorities who fund the projects. The supply and demand situation, however, can have a down-side in terms of the demands this places on individual researchers when projects grow to become time-consuming and difficult to manage. The second sector of action that is found to be highly facilitating for some researchers, is that of skills and capabilities. The importance of creativity, independence, skills and interests and the need for unorthodox management capabilities which are sensitive to the requirements of researchers for effective research activity, is a theme which comes through clearly in this sector.

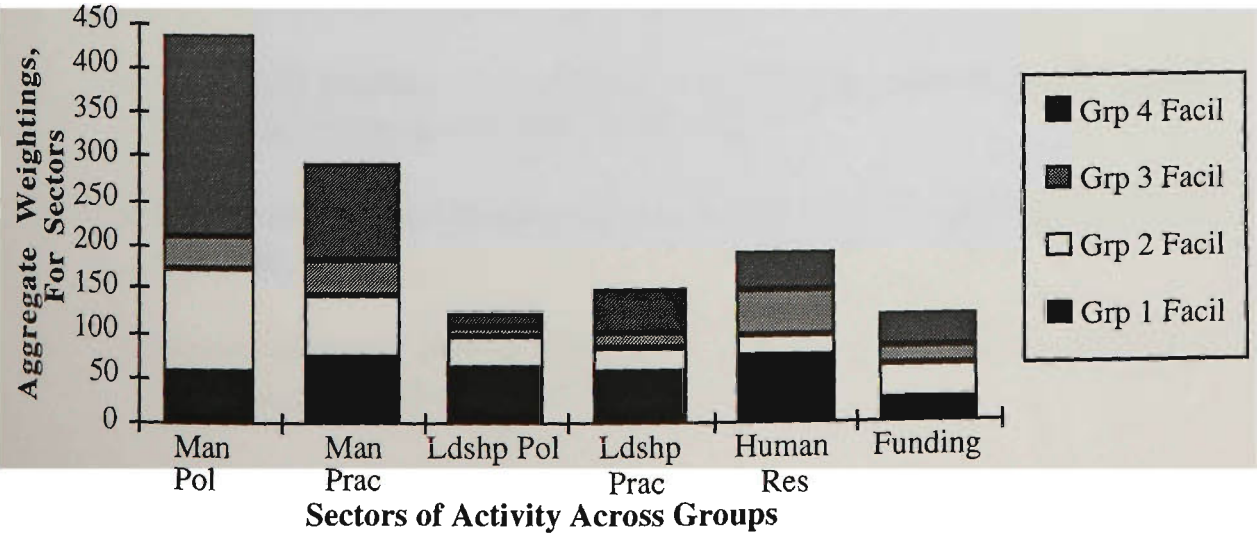
<sup>37</sup> Senge, P. M. (1990) op. cit., pp.234-235.



The value of the information revealed in these summaries demonstrated that aggregated weightings for each domain for each group would be a useful analytical step to take in quality appraisal of research environments. The aggregate weighting profiles for respective sectors of action for research provided an overall view of the quality of the research environment for each group, while still maintaining the confidentiality of individual participant researchers.

The final data set generated in Phase 4 was an *Across Groups Summary*. As the institutional setting provided the context for the study, it was felt that, if confidentiality could be maintained it would be appropriate for general themes that emerged to be communicated to all participants. An emerging theme was commented on in this summary where the generic categories or sectors were qualitatively similar in terms of effective - ineffective action for research. Once again, this type of feedback provided for both awareness-raising and sharing of a resource for organisational learning. More importantly, however, this across group summary demonstrated an appraisal framework developed in the course of the present study that could accommodate the diversity and complexity of a range of research environments. Figure 9.13 illustrates how it was possible, using aggregated weightings, to condense the diversity of facilitating activity across different research contexts, into profiles of elements of action for research within a particular domain.

**Figure 9.13 :** *Across Groups Weighting Profile for Facilitation of Research in the Organisational and Managerial Domain of Action*



In the original negotiations with the DVC Research, a request had been made for an open university forum to be held at the conclusion of the study if participants were interested in sharing what they had learned with other stakeholders in the institution. This option would have been possible with the four levels of profiles which had been generated in the study. However, the DVC Research took up a promotion to another university and the task of bringing together participating groups was simply beyond the resources and the bounds of the study in the final stages. Individuals or groups, if they chose, could follow up with their colleagues in other groups, any areas of facilitation, constraint or tension that were of concern or interest to them. The across institution themes which emerged are of particular interest, however, to the present study and will be discussed in the following chapter as they relate to the adequacy of current quality appraisal frameworks for higher education research.

#### **Phase 4 - Data Generated**

The data generated in Phase 4 were contained in two booklets :

1. *Project Feedback Summary* booklets which included evaluative accounts in table, narrative and graph forms, of the quality of the participant's research environment for their effective research practice. Also included in these feedback booklets were the final versions of participant's cognitive maps and the action category framework with its now stable sector definitions. These sector definitions had been refined throughout the information-generating and feedback processes. The narrative summaries included the following :
  - Individual Profiles of constraint, facilitation and tension in the Quality Research Environment Profiles (Table 9.4).
  - Individual - Group Comparison of aggregate sector weightings (Figure 9.4, 9.5, 9.6).
  - Group domains profile summaries and Group Profile of aggregate weightings for each domain (Figure 9.9).
  - Across Group Summary

Worksheets for follow-up group discussion, if participants wished to address claims, concerns or issues which they had become aware of in the study, were also attached to these booklets. These worksheets included a cause-effect diagram<sup>38</sup> (Appendix 20) designed specifically for follow-up to this particular study, and an analysis and planning format (Appendix 21) for organisational improvement and internal 'benchmarking' purposes. In the final feedback discussions, a number of participant researchers indicated that with the raised awareness of the inquiry process, certain weightings had changed over time because issues or concerns had been addressed. For example, an action might originally have been weighted [2] constraining. With the passage of time, the situation may have improved and the particular concern could be weighted as [3] facilitating. This was the case in one group with the introduction of new technological infrastructures to reduce administrative demands and in another with the development of protocols to deal with secrecy agreements and publication rights. So 'benchmarking' was a term that participants used in relation to the weightings grid to indicate firstly, the implementation of more effective action and secondly, the desired weighting if improvements could be achieved.

2. *Project Feedback Questionnaires* in which participants provided demographic data for project reporting purposes in the present study and critical reflective feedback about the efficacy of the appraisal activities which constituted the study.

#### **Phase 4 - Credibility and Dependability Measures**

Credibility measures for Phase 4 were required for critical reflective action on the part of both author and participants. Using *authenticity* criteria proposed by Guba and Lincoln,<sup>39</sup> participants were asked to comment on the following:

- (a) whether or not the project feedback summary had represented, with integrity, those conditions which facilitated or constrained them personally in their effective research practice (during the period in which the original discussions took place);

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<sup>38</sup> Sarazen, S. J. (1990) The Tools of Quality, Part II: Cause-and-Effect Diagrams. *Quality Progress*, July, p.62.

<sup>39</sup> Guba, E.G.& Lincoln, Y. S. (1989) op. cit., pp. 245-250.

- (b) the extent to which this process had deepened their personal understandings about the conditions and actions which facilitated their research practice; and
- (c) the extent to which the understandings gained in this process stimulated and facilitated action on their behalf to improve the quality of the research environment.

Participant researchers compared the author's evaluative summaries with their subjective experience. Having the resources for such a comparison provided in the form of project feedback summaries, participants were in a position to determine the efficacy of the appraisal tool for describing, explaining and justifying, in terms of their experience, the nature of effective and ineffective action for research. In other words, the 'standard' against which the efficacy of the tool was gauged, was that of the participants' subjective validity claims, about the dimensions of effective and ineffective action for research.

From the perspective of the author, the credibility and dependability of the inquiry itself was judged by the effectiveness of reflective practice as a means of fostering second order understanding about process-oriented activities and circumstances that facilitate effective research practice. The inquiry was conducted over an extended period of time using 'a hermeneutic dialectic' process which meant that the activities involved in the social construction of effective action for research were open continually to inspection and correction by participants.<sup>40</sup> The process steps of each phase of the inquiry were intentionally shaped to create a 'public space'<sup>41</sup> in which shared situation definitions of effective - ineffective action could be negotiated. Further, the final project feedback summaries constituted a formal member check<sup>42</sup> of the adequacy and integrity of the overall inquiry, for its stated purposes.

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<sup>40</sup> Ibid., p.244.

<sup>41</sup> Bernstein, R. J. (1983) op. cit., p.208.

<sup>42</sup> Guba, E.G.& Lincoln, Y. S. (1989) op. cit., p.239.

#### **Phase 4 - Progress in Development of Quality Appraisal Tool**

The different data sets generated in Phase 4, through successive levels of aggregation of weightings, provided participants with a range of resources for initiating discussion about the nature of possible action for improving the quality of research environments and the efficacy of appraisal practices. Furthermore the weighting grid, developed in the course of the inquiry, furnished participant researchers with a readily available tool for both describing the action involved in research, and for explaining and justifying why the action was important for effective research practice. Finally, the inquiry also provided researchers with a tool for internal benchmarking and hence, transformational quality appraisal practices.

While this chapter describes the four phases of the inquiry that were integral to the development of a process-oriented, formative appraisal tool, the following chapter explains the results that were achieved using this tool in the first two phases of the inquiry. Phases 1 and 2 of the inquiry were based on practical reflection. The information presented in the following chapter describes the patterns of significance in terms of activities, language and social relations for each of the respective research groups that emerged in the two phases. The formulation of these patterns of significance was the result of collaborative, reflective, social inquiry into the activities that sustained the lifeworld structures and hence researching capabilities, of researchers in different research environments.

## CHAPTER 10

### INQUIRY OUTCOMES, PHASES 1 & 2 : THE MEANING OF ACTION FOR RESEARCH AS A FRAMEWORK FOR QUALITY APPRAISAL

This chapter is a case report<sup>1</sup> of hermeneutically derived, shared understandings about the meaning of action for research in a variety of research contexts.<sup>2</sup> As such, the report provides an overview of shared understandings developed in the reflective inquiry processes of Phases 1 and 2 in the present study. The case report makes explicit the understandings, of author and participants, about the way in which the respective groups of individuals in the different research contexts construed action as research practice. The case report demonstrates that although researchers were involved in discipline-specific activities that were qualitatively different across the diversity of research contexts, there were generic categories or elements of action for research that could serve to define the common ground<sup>3</sup> of research as a sphere of social life. Therefore, the outcome of Phases 1 and 2 of the inquiry, in the form of generic categories of action, provided the elements of an action-oriented framework for quality appraisal of research, grounded in the everyday activities of research practice. The case report comprises for each group, firstly, a description of the way in which *activity* was coordinated in the respective groups and therefore, the means by which group identities were stabilised in order to achieve ongoing social integration. Secondly, the report demonstrates the *language* that was used by participants in the respective groups to describe and justify the relationship between knowledge and action for research in their research space. The way in which participants chose to describe how valid knowledge was produced and reproduced was an indication of how participants framed research activities in order to secure continuity and coherence of knowledge within a particular field of research. Finally, the case report demonstrates the type of *social relations*, or ways in which interactive capacities necessary for research practice, were nurtured and sustained by researchers in the respective research contexts. The similarities in the meaning of action for research, across a number of diverse research

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<sup>1</sup> Guba, E.G. & Lincoln, Y. S. (1989) op. cit., p.174.

<sup>2</sup> Habermas, J. (1984) op. cit., pp.xiv-xv.

<sup>3</sup> Becher, T. (1989) op. cit., p.171.

contexts, are demonstrated in the common elements of activity or generic action categories, within the three broad domains of organizational, conceptual and social action for research. It is these categories, referred to in the study as sectors of activity, that are highlighted throughout Chapter 10 in *italics*. The three broad *Domains* of action with their relevant *Sectors* of activity, define the basic framework of action theory, on which the quality appraisal tool for higher education research developed in the study was based.

### **An Action-Oriented Framework for Quality Appraisal of Research Practice**

The action-oriented framework constructed in the present the study was built on the three coordinates of action theory that constitute the lifeworld structures used by Habermas, in his action theoretic model. These three coordinates are the source of the domains of action, for action researching inquiry practices,<sup>4</sup> and can be explained as:

- The domain of *activity* in which the coordination of social action is the medium of social integration;
- The domain of activity in which *language* provides the medium for cultural reproduction;
- The domain of *social* interaction which shapes the meaning and value of action for research, ensuring socialisation of those involved.

In the present study, these three domains of action are represented in :

- Organisational and managerial type statements that indicate how action is currently organised and coordinated for research in the respective contexts of practice;
- Conceptual and theoretical type statements that indicate the way in which understanding for research is currently framed in the respective contexts of research practice; and
- Social and communicative type statements that indicate the means by which the legitimacy and value of action for research are shaped, through social interaction, in the respective contexts of practice.

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<sup>4</sup> Kemmis, S. & McTaggart, R. (1988) pp. 34-35.

The case report in this chapter, based on the descriptive statements about everyday activities made by participants, provides evidence of both the efficacy and the comprehensiveness of an action-oriented framework for quality appraisal of research practice. The successive working drafts of action-oriented categories are presented in Appendix 22. The final framework of domains and elements or sectors of activity for research practice, confirmed in the next phase - Phase 3 of the present study, are presented here in Charts 10.1, 10.2 and 10.3 respectively.

**Chart 10.1 :** *Action-Oriented Framework for Quality Appraisal of Research Practice in the Organisational and Managerial Domain of Action*

<p>Action that serves to organise for research practice thus securing coordination of action for research</p> <p>This domain includes <b>six</b> Sectors of activity</p> <p>Sector 1 Research management policy statements</p> <p>Sector 2 Research management practice statements</p> <p>Sector 3 Leadership policy statements</p> <p>Sector 4 Leadership practice statements</p> <p>Sector 5 Human resources-related statements</p> <p>Sector 6 Funding statements</p>
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**Chart 10.2 :** *Action-Oriented Framework for Quality Appraisal of Research Practice in the Conceptual and Theoretical Domain of Action*

<p>Action that serves to frame understanding for research thus securing continuity and coherence of the research fields</p> <p>This domain includes <b>six</b> different Sectors of action</p> <p>Sector 1 Discipline base statements</p> <p>Sector 2 Knowledge type statements</p> <p>Sector 3 Theoretical and methodological frameworks statements</p> <p>Sector 4 Knowledge growth pattern statements</p> <p>Sector 5 Authoring of knowledge and publication strategy statements</p> <p>Sector 6 Skills, capabilities and creativity statements</p>
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**Chart 10.3 : Action-Oriented Framework for Quality Appraisal of Research Practice in the Social and Communicative Domain of Action**

<p>Action that shapes what counts as legitimate and valued in research practice thus ensuring sustainability of interactive capacities for effective research practice</p> <p>This domain includes <b>five</b> different Sectors of activity</p> <p>Sector 1 Research activity statements</p> <p>Sector 2 Reward systems statements</p> <p>Sector 3 Legitimation structures statements</p> <p>Sector 4 Communication statements</p> <p>Sector 5 Spheres of Influence statements</p>
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**Patterns of Significance for Respective Research Groups**

Descriptive statements made by participants as well as the author’s journal entries following Phases 1 and 2 interview, discussion, observation and debriefing activities, were the substantive data used to compile this case report. Conceptual mapping<sup>5</sup> was an important tool used during initial discussions, for facilitating the identification of participants’ tacit understandings about research environments and developing shared understandings. The maps included in this chapter, from at least one member of each of the respective groups, were used by the author for triangulation purposes.<sup>6</sup> Triangulation between different data sources (participant’s statements, formal documentation from the different research groups, researcher’s journal notes and conceptual maps) served as a credibility check for this case report because the variety of data sources afforded a multi-focal view of a particular research space that served to explain differences in participants’ understandings. Conceptual maps are used in this chapter because they demonstrate not only the diversity of research practice, but also the similarities and differences in patterns of significance within each group, that could be explained by the variations in roles and responsibilities. Appendix 10.2 lists the research groups, numbers of participants in each

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<sup>5</sup> Fiol, M., C. & Huff, A. S. (1992) op. cit., p.277.

<sup>6</sup> Guba, E. G. & Lincoln, Y.S. (1981) op. cit., p.186.

research group both in the Phase 1 and 2 inquiry processes that contributed to case report and in the key activities of the overall, emergent design.

The case report is an interpretive account that, by implication,<sup>7</sup> maps out the areas of metalearning that constitute the *invisible product* of higher education research. These interpretive accounts also demonstrate the strengths and the limitations of the the Phase 1 and 2 inquiry practices, based solely on hermeneutic inquiry or practical reflection. Practical reflection provided a ‘topographical’ map of general patterns of significance of moral/practical action for research in the different contexts of research. It could not, without a critical perspective, provide the more explicit information required for appraisal purposes about the *value* of action for research.

The Sectors of activity that emerged within the three broad domains of action, across the different contexts of research are signalled, in this case report, by the use of Italics. The specific *value* that individuals and groups attached to different sectors of activity, are discussed in the results of Phase 3 critical reflective processes, described in the following chapter. The importance of this chapter is that it demonstrates the way in which the action-oriented framework for quality appraisal developed in the study, was grounded in the everyday activities of research practice. In so doing the case report explains and justifies the groundwork that was necessary for the subsequent, critical reflection, reported in the following chapters. This groundwork involved defining the meaning of action for research, in the context of the respective research environments, at the level of research practice. The case report is presented in five parts, each part representing a particular context of research and, for the purposes of the present study, groups of individuals working in one of the five fields of research. If participants referred to themselves as ‘team members’ then this label was use in describing their actions. The term ‘participant researcher’ is used hereafter to distinguish researchers from administrative personnel (hereafter participants) who took part in the study.

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<sup>7</sup> Kelly, G. (1966) ‘Ontological Acceleration’ in Maher, B. (ed) (1979) op. cit., p.26.

## GROUP 1 - HUMANITIES

Group 1 consisted of four participant researchers involved directly in the two core research programs of a national centre.

### Group 1 : Activities that Describe the Organising of Action for Research

In Group 1, the leader's *management* abilities were held in high regard by group members. These abilities included the matching of people to tasks, fostering of commitment to research and shouldering of major responsibilities for the research program in terms of direction, focus, funding and publication. Two participants specifically mentioned the value of management training for this field of research.

The establishment of this national Centre was confirmation of an already well-developed research program founded on the research strengths of the leader and the leader's international standing. In fact, one of the concerns expressed in the group was that because selection criteria focused only on academic profiles, institutional selection procedures could undermine everything that had been built up. If selection of a new program leader were to be made on academic criteria alone this would mean that the special management capabilities required of a leader in this field of research, may not be replaced. *Leadership* in Group 1 was characterised by a combination of; friendliness and accessibility, commanding personal strength, concern for protocol and incisive appraisal of processes and outcomes.

In Group 1, commitment to research tasks on the part of group members was almost palpable. Those who participated in the present study did so at a personal cost because the time set aside for interview/discussion sessions meant that the research

‘day’ simply expanded so the required tasks would be completed. Because of the importance of the contribution each individual made to achieving the group’s research goals, each was highly valued for his/her expertise. In practice, the success of the research was dependent upon individual expertise and commitment to a task. It was these principles for effective action that permeated all *management practices*.

The absence of personal ‘territory’, in terms of office space, was one of the key patterns that emerged in the use of *human resources* in this group. Although researchers did have their own desk, they were rarely ‘at home’, so securing appointment times for the present study was a difficult task. There was often so much for these researchers to accomplish within set timeframes, that the research environment was permeated by a general air of ‘contained panic’. The irony was that most research projects conducted by this group of researchers spanned many years.

While there were six full-time researchers in the group, only four took part in the inquiry activities for the present study. With the core research program being ‘offshore’ and requiring extended overseas stays, interview/discussion sessions necessarily required a long term commitment to the present study, on the part of participant researchers. According to participant researchers, their status, skills and capabilities were simply tools for effective research practice and the nature of daily activities was determined by the immediate research imperative. The research imperative served to drive all *human resources policies and practices*.

Of the participants in the present study, the two senior researchers were the only ones involved in the teaching program of the host School. However, a number of the group were engaged to a greater or lesser extent in supporting activities directed towards *fundraising*. The group leader took the major responsibility for securing and allocating research funding.

## **Group 1 : A language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

In Group 1, the *nature of the knowledge* that was the focus of research was a key factor in determining work practices and the action priorities of group members. The knowledge base encompassed a wide range of specialisms and vast amounts of detailed data. None of these data were computerised except for information related to genetic aspects of the research. Because of the limited transferability of detailed data from one project to another, and the time scales involved, computerisation was not considered as a viable option for data storage, retrieval and management purposes. While huge amounts of data were collected in the course of each project, much of the information was discarded according to the relevance criteria that were established for a given project. This being the case, both personal and organisational memory were of paramount importance to the group in maintaining its 'leading edge', and therefore academic status, through *publication* within the field of study.

There was some indication that formal *methodological* frameworks, while important for interpretive processes, were subordinate to acquired tacit or craft knowledge. This 'craft' knowledge was always central to decision-making processes. The essential credibility measures in this field of study were the use of primary source data and triangulation of detailed information. The *skills and capabilities* of individual group members were the driving force behind the group's ability to generate publications each year. Such a publication record was atypical for this particular field of study where some researchers may take up to twenty or thirty years to publish their findings.

## **Group 1 : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research**

With the combination of strong leadership, support for individual researchers from the Office Manager, and the high level of regard for the group on the part of the host

institution's administration, Group 1 had a very well-defined identity and research mission. Because a wide range of specialist knowledge was required for this field of study, *research activity* necessarily involved a team effort. Primary research activity was field-based and in this context, division of labour was always determined by the level of skill and acquired expertise of individuals taking part. In this field of research, satisfaction from commitment to, and involvement in, the research process itself was considered to be sufficient *reward*. Academic authority, and therefore *legitimacy*, was determined by the comprehensiveness of research practices, so thoroughness was the hallmark of effective research practice at whatever level of involvement.

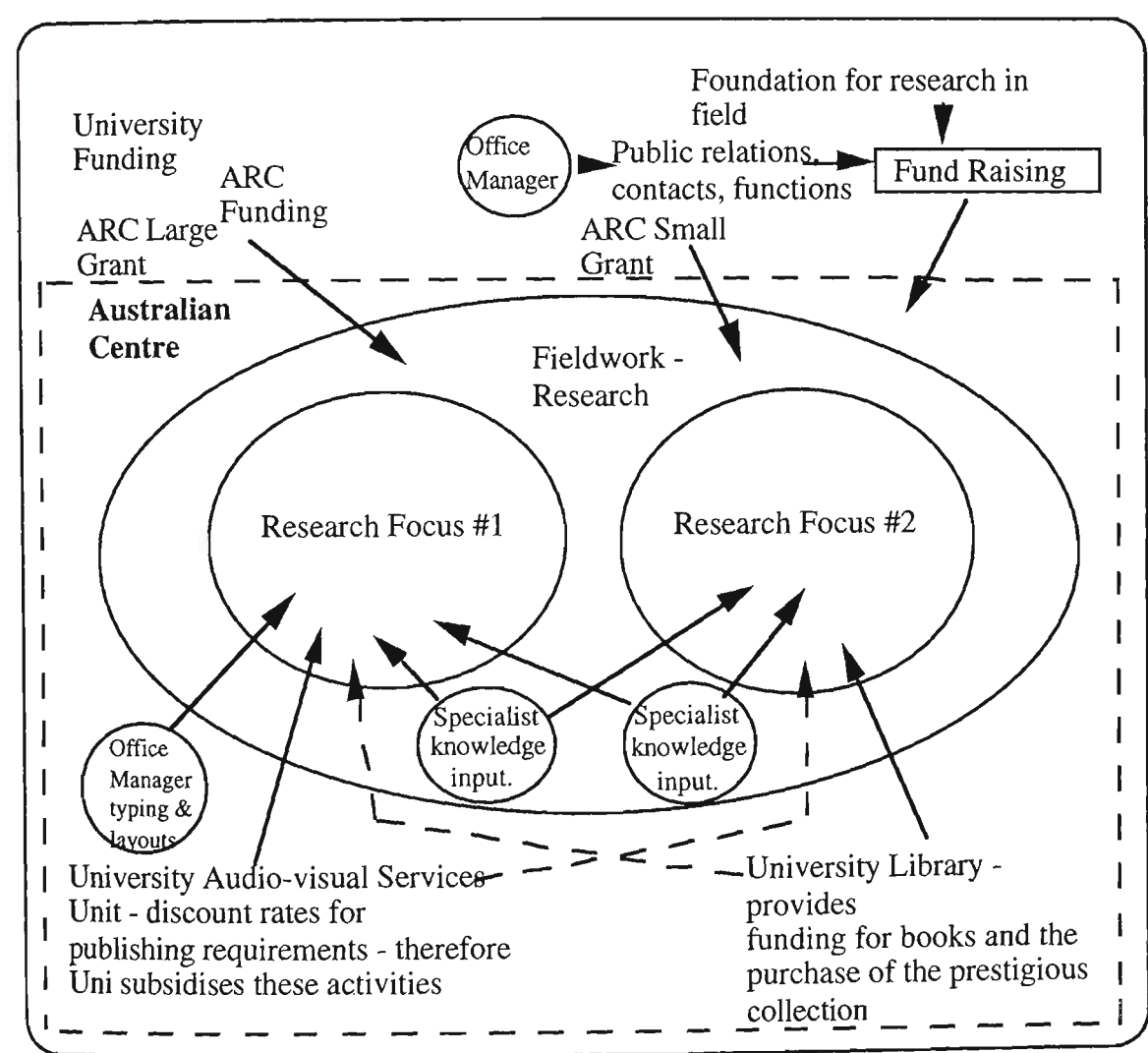
Information sharing and personal contact were highly valued within the group. The tea room, and particularly morning tea time, was integral to *communication*, planning and priority-setting. The tea room was a free discussion space in which all perspectives and ideas were welcomed and considered. Individuals felt that this was a time in which their 'voice' could be heard and in which mutual shaping of activities could take place. The 'anchor' person, in terms of social relations for the group, was the office manager who was held in high esteem by all members of the research team. Although this was a voluntary position, the office manager appeared to play an important role in the continuity, cohesion and support of research activity. The formality and protocol in the group was balanced by strong bonds of allegiance and mutual respect.

The Centre itself had a high profile within the institution and attracted infrastructure support because it was seen as an area of research strength, having considerable *spheres of influence*. In turn, official university standing was important to the Centre for its international recognition and academic standing. Official Australian Centre status was important for longer term international negotiations and for raising the Centre's public profile in order to attract research funding.

# **Group 1 : Conceptual Map of Research Space From the Perspective of a Research Program Leader**

Figure 10.1 demonstrates how one of the research program leaders construed the research space of Group 1. While the boundaries of the research program activities are well-defined, those of the research space, in relation to funding, are represented as permeable.

**Figure 10.1 :** *Group 1 Research Space From the Perspective of Research Program Leader*

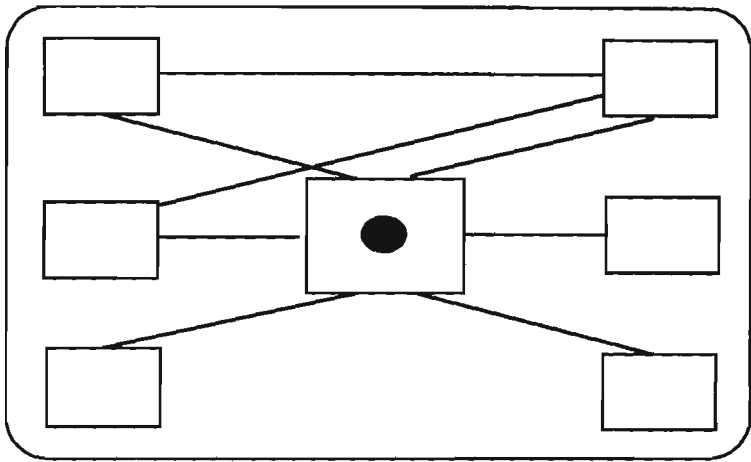


Although this conceptual map, Figure 10.1, is oriented specifically towards the research activities of the group, the wide-ranging support role of the volunteer Office Manager, in both fund-raising and publications activities, is still a significant feature. Of particular interest in this conceptual map is the 'web' of funding support for the Centre, from both institutional and external funding sources.

**Group 1 : Conceptual Map of Research Space From the Perspective of a Senior Researcher**

The second conceptual map for Group 1, presented in Figure 10.2, was drawn by one of the senior researchers who worked predominantly with the Centre leader. This map demonstrates the pattern of social relations between researchers, the Centre leader (central box) and the Office Manager (black dot in central box).

**Figure 10.2 :** *Group 1 Research Space From the Perspective of Senior Researcher*



This map in particular, confirms the central roles of the group leader and Office Manager in coordinating and sustaining the action of the group.

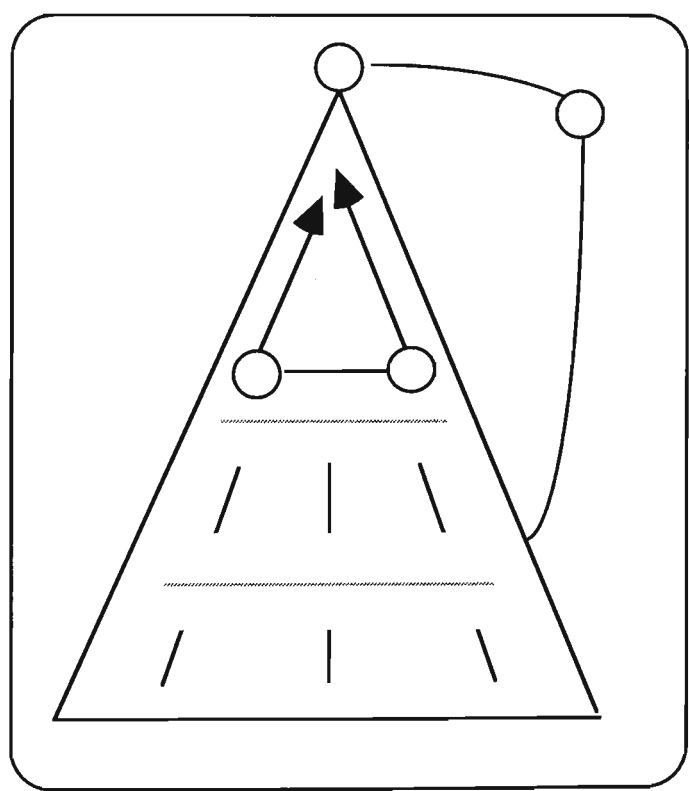
**Group 1 : Conceptual Map of Research Space From the Perspective of a Research Assistant**

Figure 10.3, maps out the research space of Group 1, from the perspective of a research assistant. The research assistant had a role to play in both of the Centre’s core research programs. While interactions are represented in a hierarchical manner in this conceptual map, the role of the Office Manager, indicated by the sphere outside the triangle, linking the action of the leader with all other levels of action, is once again confirmed as an important activity-spanning function.



One’s location in the hierarchy in this group is determined by the individual’s level of expertise and the degree of responsibility taken, by mutual consent, for the overall research programs. The shouldering of responsibility is represented symbolically, by the traditional hierarchical organisational structure.<sup>8</sup> In practice, however, the ‘free’ discussion space of the morning tea room and the very high level of commitment on the part of all research colleagues, meant that the organisation of daily activities was determined by the value of action for research rather than the academic status of the individual.

**Figure 10.3 :** *Group 1 Research Space From the Perspective of Research Assistant*



These three different conceptual maps from Group 1, have been presented in order to underscore the similarities and differences in construal of the research space across the varied roles and responsibilities of a particular research context. The present study

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<sup>8</sup> Scott, W. R. (1992) *Organizations: Rational, Natural, and Open Systems*, Third Edition, Prentice-Hall, Inc. Englewood Cliffs, New Jersey, pp. 85-86.

utilises these maps as a tool for making explicit the meaning of action for research, from the perspective of those involved directly in the day to day activities of research practice.

## **GROUP 2 - INFORMATION, COMPUTER AND COMMUNICATION TECHNOLOGIES AND GENERAL ENGINEERING**

The researcher participants in Group 2 were the only group who took part in the present study who were not members of a designated research centre or unit. Overall research activity, certain aspects of which are described in this study, was the research component of the accepted role for an academic within a tertiary institution. Doctor of Philosophy (PhD) researchers were important in this research context because their time was dedicated wholly to research pursuits which supported the core research programs. The participant researchers were a 'group' in name only for the purposes of the present study. This 'grouping' bore no relationship to either a tacit or an organisational structure, but served only as a term for collective participation in this study.

### **Group 2 : Activities that Describe the Organising of Action for Research**

In Group 2, *management policy* was directed towards securing resources and providing conditions for the development of talented young researchers. *Management practices* were subtle. Individuals were sought out because of their knowledge and capabilities, and provided with the support they needed to set, and to attain, their own objectives. At the level of everyday *practice*, however, time management was a problem for members of the research group. There appeared to be unresolvable tensions when it came to prioritising multiple commitments to teaching and research, and to attaining the desired levels of excellence in these activities.

In Group 2, hierarchy was noticeable by its absence but *leadership* by the departmental head, in shouldering responsibility for attracting research funds, was a very strong theme that came through in all discussions. Eight full-time researchers were employed through the leader's research projects. Researchers, however, worked in their own 'space' and carried out their individual work within boundaries defined by the focus of their research activity.

In terms of *human resources policies and practices*, PhD research was integral to the inquiry program. However, existing personnel policies and remuneration levels presented a real challenge to the leader in securing and keeping the levels of expertise required for leading-edge research programs. Industry contacts were brought into play in order to secure program *funding* but this could be limited in terms of satisfactorily completing R&D cycles. If ARC funding ceased though, the strong links with industry did provide a second chance for continuation of existing programs. The real difficulty lay in attracting funding for the more generic technologies, so much on the 'leading edge', that they were not considered in government policies and funding priorities.

## **Group 2 : A Language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

The nature of the *knowledge* that served as the focus for research in Group 2, was a predetermining factor in the type of work practices in which individual researchers were engaged. Research tasks were basically computer or device-oriented. The baseline research carried out at another university, by the leader in collaborative development work with Commonwealth Scientific and Industrial Research Organisation (CSIRO), was the foundation of the core research program. *Theoretical*

*and methodological frameworks* across Group 2 varied depending on the particular specialisms of the individuals concerned. The group's leading edge researchers were often involved in extending theoretical and methodological boundaries because no established theories for new lines of research existed. The research pursuits of Group 2 served to complement development work in related industry sectors as these university researchers had access to libraries, universities networks and other specialists in related discipline areas.

The group had evolved complex development strategies, capitalising on the industry-related purposes served by their research. Such development strategies were necessary because the level of sophistication and related costs of carrying out research in the field were beyond the resources of an academic enterprise. These development strategies were based on *publication* of theoretical models and presentations of same at international conferences. Information was presented in public forums such as conferences in order to generate interest amongst potential industry partners. Industry partners with an interest in the models that had been shared would provide the necessary operating devices to develop the theoretical models presented at conferences. These development strategies relied for their strength on network contacts and effective network access patterns. With rapid developments and related *growth in knowledge* in this high technology field of research, participant researchers had to embrace change as integral to existence, because the 'leading edge' was always moving very quickly. As a consequence of the rate of knowledge growth, personal research links with industrial partners in 'real research' were preferred to journal *publications* as the means by which a research profile was developed and sustained. The *creativity* of PhD researchers taking part in the research program, was a major resource for development of leading edge *skills and capabilities* in this group.

## Group 2 : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research

The research environment of Group 2 was characterised by general informality in social relationships. It seemed that at a theoretical level though, people basically worked alone on their research *activity*. In recognition of their contribution to the research programs, there was a definite policy that PhD candidates had full researcher status. As far as possible, their remuneration was consistent with that for staff members. Funding of PhD researchers to these levels was possible only because of the leader's ability to attract major research funding. The down side for the leader, in shouldering such a responsibility, was that the demands of international travel required to develop connections for attracting contract research funds exacted a high personal toll. International travel was a necessary component of research activity in this field because positioning of the group's research pursuits, within the network of academic and industry organisations, was crucial to *legitimation and reward*.

Computer network infrastructure provision was an important resource consideration for this group, because this infrastructure served to ensure both research-related *communication* and network access. Although the same basic science was involved across specialisms, communication could be limited because the work of individuals tended to be device specific and so there was little sharing of information at a theoretical level within the group. There were regular departmental meetings which involved everyone in the related disciplines and specialisms. The tacit protocol at these meetings, however, was that nothing serious, such as research experiences and theoretical problems, was mentioned. Light banter amongst those attending the meetings clothed the general business of research administration. If the leader was absent from these meetings, there seemed to be a lack of direction and purpose.

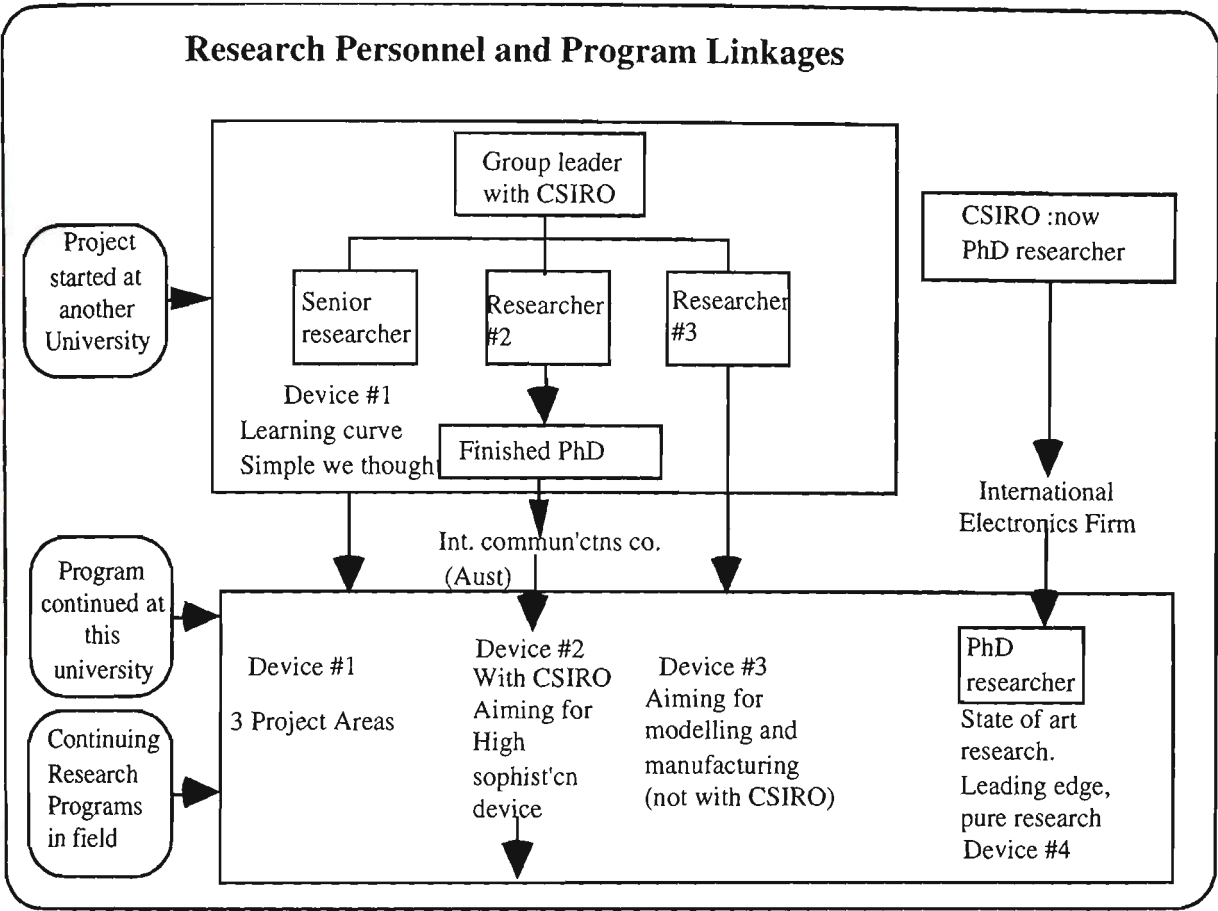
Overall, allegiance to shared program goals appeared to be the important ‘social glue’ that held the range of cognitive enterprises together.

Broader *spheres of influence* for members of the group encompassed well-established national and international linkages with other universities, government utilities, and industry. Researchers, through their previous workplace experience and personal expertise, formed the ‘links’ between the departmental research programs and key national and international organisations in the field. Collaboration with research partners in industry, public utilities and CSIRO was necessary because the cost of the technology involved was well beyond the capacity of a single organisation to support. Active industry links were central to shared program goals and crucial to the success of individual research initiatives. The matching of project proposals to demonstrated industry needs, was an important aspect of research planning if proposals were to attract industry support. The outer organisational boundaries of the research space were quite fluid and permeable because links with industry both depended on, and flowed through, the personal contacts of research colleague networks.

## **Group 2 : Conceptual Map of Research Space from the Perspective of a Senior Researcher**

The map in Figure 10.4, is one of five drawn by a senior researcher within the group. While this map tracks the research program in terms of personnel and their particular links and specialisms, other maps drawn by this participant researcher included: linkages between the university department and design firms or outside agencies; parallel development programs and networking in this field; research programs and levels of increasingly more sophisticated devices; and the R& D program development strategy.

**Figure 10.4 :** *Group 2 Research Space From the Perspective of Senior Researcher in Established Program*

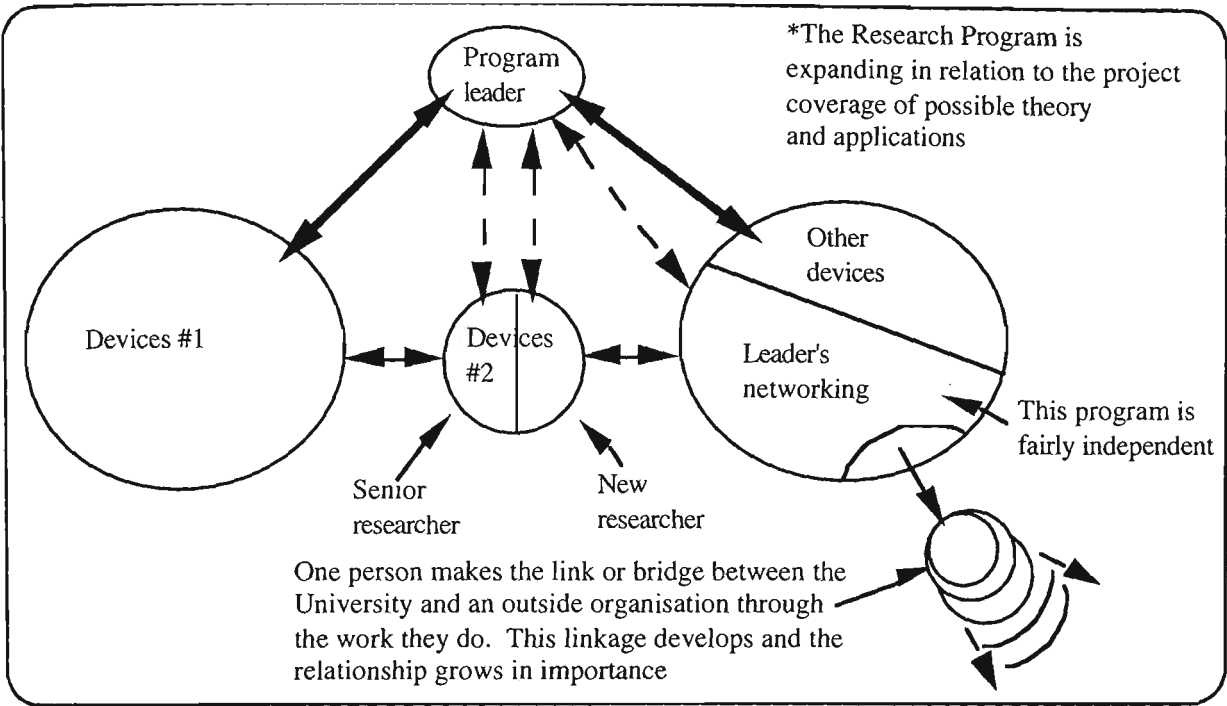


The map in Figure 10.4, demonstrates the role of personal links with CSIRO and industry in the development of the research programs, as well as the individual nature of research activity pathways.

**Group 2 : Conceptual Map of Research Space From the Perspective of a New Researcher**

Figure 10.5, drawn by one of the relatively new researchers in the group, mapped the research space in terms of the inter-program linkages established through the initiative of individuals rather than as a result of management policy.

**Figure 10.5 : Group 2 Research Space From the Perspective of New Researcher**



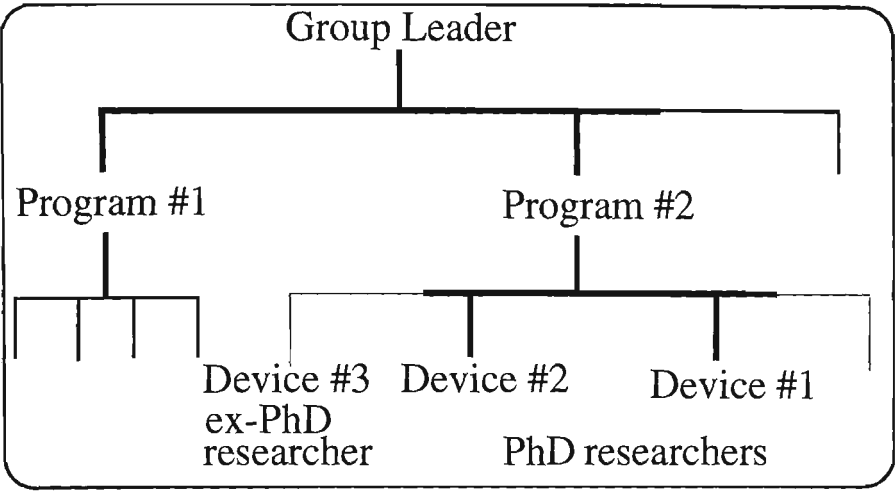
As in the previous map, 10.4, the importance of personal links is highlighted. In 10.5 these links between overall program activities are qualified by the thickness and continuity, or otherwise, of lines joining the different aspects of research activity. The central role of the group leader in program development is demonstrated by the overall configuration of these different activities.

**Group 2 : Conceptual Map of Research Space From the Perspective of a PhD Researcher**

The following map of the research space presented by a PhD researcher in Figure 10.6, emphasises the individual nature of research practice within this field of research. The individuality of research pursuits was the key difference between the research management practices of universities and those of CSIRO noted by this PhD researcher. In the CSIRO, research activity was organised on a team basis and individual's were viewed and trained as participants in a research process. At university, individuals were trained as independent 'knowledge-centres'.



**Figure 10.6 :** *Group 2 Research Space From the Perspective of PhD Researcher*



The central role of PhD research in the overall research program is a feature of this conceptual map.

**GROUP 3 - SOCIAL AND MEDICAL AND HEALTH SCIENCES**

Group 3 consisted of six members of a large, formal, research Unit. Unlike the previous two groups, participants in Group 3 included individuals with roles other than those of researcher or research assistant. Group 3 interview/discussion sessions also included the newly appointed Administrator and the Administrative Assistant. The Administrative Assistant had previously played a central, nurturing role in the social relations of the group, but with the changing organisational structure, the whole Unit was undergoing a period of readjustment and reorientation to different roles and responsibilities. Because of the inclusion of two administrative staff, Group 3 had the highest number of participants involved for the duration of the present study. Additionally, Group 3 requested the author facilitate an organisational development workshop to address the strains and tensions that were emerging with unprecedented organisational growth and change.

### Group 3 : Activities that Describe the Organising of Action for Research

Group 3 was a high profile, fast-growing research unit whose present research activities had grown from a highly regarded, single research project. All members of the original group had been committed to the research program. As a consequence of the level of commitment, the collective activity of those involved was virtually self-managing, although nurtured and supported by the Administrative Assistant. However, unprecedented growth in the Unit and the demands of research highlighted the need for *management* knowledge even though this was seen by the Unit Head to be in contradiction with its research brief. A full-time Administrator with higher degree research qualifications was appointed to the Unit. In addition to addressing many of the organisational issues that were apparent, the new Administrative Manager also had to confront and deal with the animosity towards, and uncertainty regarding, the role of Administrator itself. The designated title of this position was problematic because it was not seen as a role that involved management of research, hence the distinguishing label of Administrative Manager.

While the work of the Unit was primarily at a practical/applied level, the research outcomes were highly pertinent to a volatile and emotionally-charged area of health policy. External pressures were matched by pressures internal to the Unit's organisational *practices*, in which the leader's self-professed management style consisted of 'never telling anyone what to do'. While the leader was highly respected for academic excellence and researching capability by group members, the style of management in the context of rapidly expanding group membership, was proving to be problematic. Collaborative decision-making, although highly valued by the leader, was falling down in *practice* because of the greatly increased number of team

members. Accepted patterns of communication were proving ineffective for emerging information needs. There was an expressed need for more formal structures and a middle layer of personnel to support the research program at the level of the individual.

The difficulties caused by a general lack of space were compounded by uncertainty and ambiguity about roles and responsibilities within the Unit. Amongst participants, there was an expressed need for changed *leadership practices* in this regard. The need to maintain the Unit's public profile was complicating internal tensions. A public profile was being sustained, but at great personal cost to the leader and senior research colleagues. There was also a constant pressure for the leader to play an advocacy role, to often hostile audiences, for the group's research interests and outcomes. With the expansion of the Unit's activities, administrative demands were becoming excessive. In general *human resources policies and practices* were highly problematic. This was due, in particular, to inflexible institutional personnel policies which gave rise to a conflict of interests between the Unit and university administration. The appointment of an Administrative Manager would, it was hoped, address some of the 'growing pains' of the unit. It also was hoped, that with a conscious move towards more administrative management support, the Unit leader would be relieved of the mounting number of administrative tasks for which academic training had provided limited skills and competencies.

The Unit was one of two research centres that made up a designated national Centre. The partners were located in different states. The fact that infrastructure *funding* for the national Centre went to the other research site, only added to the strains within this Unit. While much of the Unit's funding came through special funding structures, involving government appointed bodies, there was no infrastructure attached to the funding. Difficulties were also experienced because external funding for the Unit was

decided in a highly political environment. Internal, institutional funding also presented a problem because it was very difficult to get up-to-date knowledge of accounts for management decision-making purposes.

### **Group 3 : A Language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

The field of research in which this Unit's activities were located was an emerging discipline, bringing together a number of *knowledge* bases within a sociological framework. The core knowledge domain represented a marriage between the social and the hard sciences. However, it was often the case that the core social research had to be translated into a form that suited policy-level information needs, because the Unit was seeking to transform, rather than to follow, the policy lead. *Theoretical and methodological* frameworks were an area of contestation. The two principal research programs were driven by different theoretical and political imperatives. However, in practice, the research was always aimed at feeding back information to constituency organisations and this aim constituted the common goal to which all team members were committed. The immediacy of the practical need to disseminate information was often in conflict with the requirements of academic rigour. Research outcomes were much sought after and provided vital information for a wide range of very different audiences with equally varied reporting requirements. Researchers were reluctant to write for journal publication, however, because they were working in an emerging discourse and it was difficult to compete with the established and accepted academic frameworks.

*Publication* pressures for Group 3 included the need to develop reporting *capabilities* and competence in a range of genres. The different genres included those of academic

writing, policy level reporting, educational materials, social advocacy information forums, reporting in health specialisms and grassroots information resources. Because this field of research was in a highly politicised domain, committee membership and forum presentation *skills* were also essential. Additionally, *competency* in communicating information in a variety of modes and genres, lack of self-consciousness, the ability to be a self-starter and expertise in qualitative and/or quantitative methodologies and preferably both, were greatly valued.

### **Group 3 : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research**

Great strains were appearing in the fabric of the Unit's social relations. This was because the rate of growth from a small close-knit group to more than twenty researchers was accompanied by significant pressures, unique to this particular field of research. In its earlier days, the current Administrative Assistant played a central role in supporting, nurturing and *communicating*, but with greatly increased numbers in the team this function was no longer possible. In its current stage of development, the multiplicity of frameworks and goals within the Unit appeared to be working against both social cohesion and the nurturing of interactive capacities necessary for research *activity*. The dominant discourses, pertaining to the research focus, were those of other research organisations who were located in the hard sciences. It was these organisation that were in competition for the research funds dedicated to this field of research. Organisations belonging to the dominant discourse of hard science were at an advantage in the competition for funds, because they enjoyed the status of related statutory authorities in terms of *legitimation* of their research pursuits. This meant that those in the hard sciences, competing for research funds, had well-established infrastructures at their disposal which made it difficult for the Unit, working as it was

in an emerging discourse, to gain access to resources that were tied to the established infrastructures.

The *reward* for the Unit leader, for the effort involved in raising the profile of their research pursuits, had been the satisfaction of making considerable inroads in securing access to resources. The effort involved in increasing its *sphere of influence* within the community, however, meant that the Unit was subject to increasing levels of tension and pressure. Strains were evident in: the internal relations of the Unit; the interactions between the Unit leader and the host institution's administration; and at the interface between the Unit's goals and the expectations of related government-appointed bodies. In spite of these difficulties, however, the host institution was supportive of the Unit because it attracted high status grants from the ARC, the World Health Organisation as well as related government organisations, giving considerable kudos to the university.

The close ties between the Unit and relevant constituencies were both strong and supportive, but at times even these relations were undermined by misunderstandings and strategic demands. None of the conceptual maps completed by members of this group included the other institutional partner in their research space.

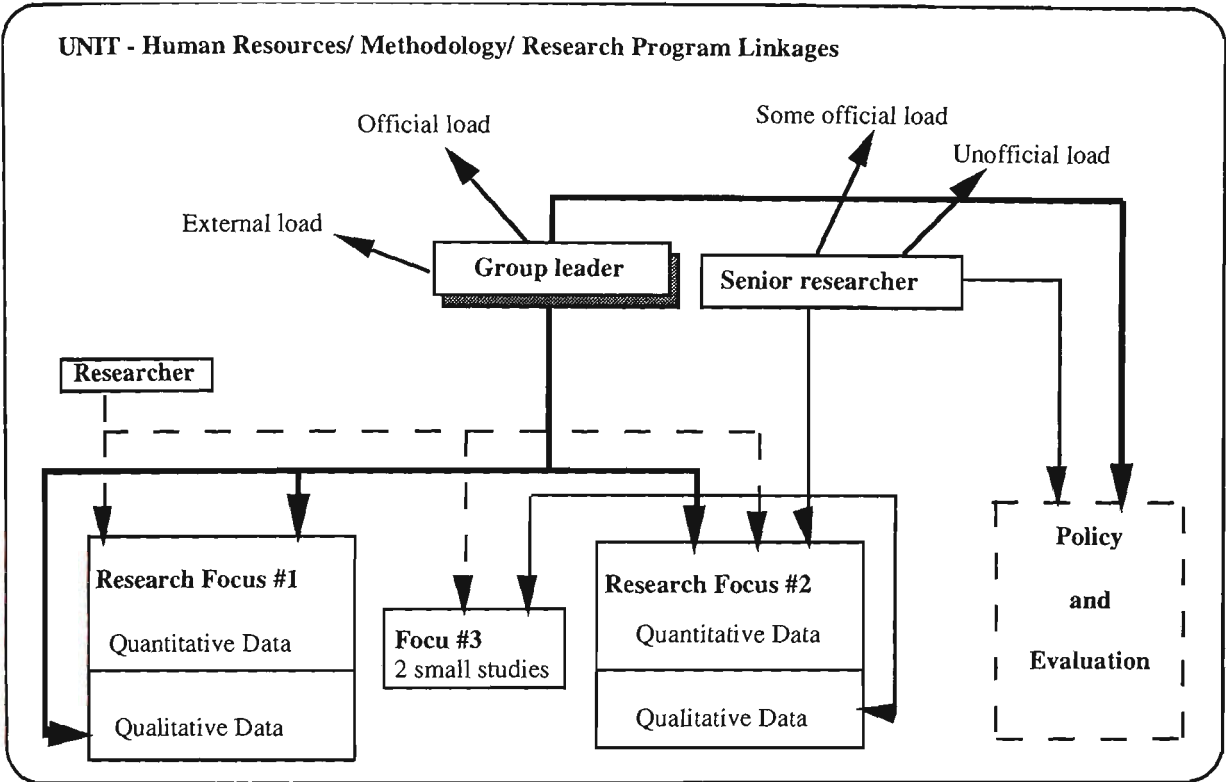
### **Group 3 : Conceptual Map of Research Space From the Perspective a Senior Researcher**

This conceptual map, Figure 10.7, by the senior researcher of the group, highlights:

- The 'load' that researchers were feeling in this research context;
- The extra responsibility taken by the group leader with regard to both research and policy activities; and

- The very distinct demarcation between the quantitative and qualitative methodological frameworks employed in the research programs.

**Figure 10.7 :** *Group 3 Research Space From the Perspective of Senior Researcher*



The strength of the lines linking different aspects of the research program, is an indication of the level of responsibility shouldered for the Unit’s research pursuits and public profile. From the perspective of this senior researcher, the Unit leader was taking a major share of the responsibilities.

**GROUP 4 - BIOLOGICAL SCIENCES**

Group 4, while a research Unit in name, was more an emerging cluster of related research interests. Those involved in the present study included four researcher participants, one of whom was the elected Head of the Unit. At the level of research practice, these participant researchers had their own, ongoing, personal core research programs, distinct from their Unit-related research involvement.

#### Group 4 : Activities that Describe the Organising of Action for Research

This recently-established Unit was organised around the principles of independence, autonomy and self-direction. Such *management* principles, according to the leader, were not understood by those in the new managerialist culture, who considered themselves *research managers*. Cooperation and collaboration in the interests of problem-solving appeared to be the *modus operandi* of this loosely-coupled, 'tacit' structure varying between twenty and forty people. The leader was philosophically opposed to the concept of a research manager and made a clear distinction between what was regarded as the proper concerns of a researcher and the less important, but obviously necessary, concerns of research *management*. While a professional manager had recently been appointed to the Unit and, even more recently, dispensed with, this appointment had created unprecedented tensions and strains in social relations. However, there was a realisation amongst these participant researchers, that because quality time for generating knowledge was severely limited, there was a need for improved expertise in management skills and capabilities. The management structures of the university's commercial arm, in the form of legal protection for those involved in organising and carrying out research activities, were seen as both valued and necessary.

At the level of *research management practice*, a project-based, collegiate model supplied the tacit organisational framework for Group 3. Informal meetings in social settings were the preferred forums of interaction and planning for research pursuits. Headquarters for the first collaborative project, for example, were in the tea room. The idea for the Unit itself was 'hatched' over a cup of coffee, in discussions regarding the government's changing policy towards research funding. There was a strong sense of community in the School that hosted the Unit. This sense of community grew out of the founding Professor's *management policy* which had been to integrate discipline and specialty areas. The Unit label simply provided an identity for an already well-



established philosophy that was reflected in the traditional patterns of academic activity and social interaction. Everyone from a large pool of expertise contributed their skills, as and when needed, and there was no discrimination between employment levels. *Leadership* was a function of skills and capabilities for the task in hand, with the driving force coming from intellectual imperatives rather than an academic or administrative role. When the option of a professional manager to deal with administrative requirements was tried and found wanting, the Unit returned to its traditional *human resources* model of bringing in expertise, including that of management, on a needs basis. Institutional personnel policies were considered inadequate for the flexibility required for research activity in this field of research.

The immediate concern for the Unit involved attracting *funding* and the leader indicated that, at this early stage, great effort was required in this regard. The Unit's formation had been a strategic move to place the researchers in a more advantageous position to attract research funding. New researchers, however, still found it particularly difficult to gain a 'toe-hold' in the funding stakes and funding for conferences had also been cut at the level of the institution. This made it difficult for new researchers to form professional associations and to secure other sources of funding. Fortunately, the applied aspects of the research were very attractive both to related industries and public utilities, and this often resulted in the provision of expensive equipment to different research programs, so that industry or utility information and development needs could be met.

#### **Group 4 : A Language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

The field of research that these researchers were involved in was made up of a wide range of specialisms. Absence of comments about discipline knowledge reflected the

conscious effort within the School to foster a research community, rather than academic territories. In this research context, specialisms were complementary, rather than a divisive force in terms of research practice. In this *knowledge* domain, when called on to solve a particular research problem, many different suppliers of expertise functioned as integrally related levels of focus for the task. In some of the individual specialisms, large amounts of detailed data were stored on computer database for computation purposes. Because of the large amounts of detailed data, information management capabilities of this nature were central to research programs. Even so, it was still sometimes necessary to ‘ditch’ large chunks of data when experimental treatments were not responding.

One of the key issues for this emerging Unit was the *publication* and communication of research findings to the general public. In order to raise the potential of the Unit for attracting funding, researchers had to improve the Unit’s public profile by engaging in activities to educate the public about concerns of a biological science nature. Effective communication required a conscious effort to write in genres other than those for academic audiences. Approximately fifteen people were involved in the writing of one book, indicating the high level of commitment to communication of research findings across the School.

All researchers participating in Unit research activities maintained personal research programs. As a result, there was a feedback effect that served to enhance the School’s development of researching *skills and capabilities* for individuals involved in Unit research projects. This problem-centred research environment was seen as requiring unorthodox management practices, because the phenomenon of *creativity* did not respect normal office hours. This is why, in this research context, having an administrator who understood the work of researchers was considered important because, as one participant put it, ‘. . . ideas [were] not commodities and intellectual productivity [was] not like a conveyor belt.’ (Participant researcher #1, Group 4)

#### **Group 4 : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research**

Independence was seen as a key to preventing researchers stagnating and it was the principle of individual choice that permeated all research involvement in this research environment. Research programs depended on the self-motivated, collaborative *activities* of colleagues in problem-setting and problem-solving, so willingness to contribute skills and capabilities was of paramount importance. Some large-scale research activities could involve substantial numbers of participants, ranging from senior researchers to postgraduates, undergraduates and interested volunteers, so *communication* of a theoretical and methodological nature was a practical, everyday necessity. Research groupings were formed around a particular problem to be solved that was relevant to the knowledge bases of participants, rather than to any formal organisational structure. Informal discussions were the means by which formal collaborations were established for ARC proposals. The *reward* for being involved in research associated with the Unit, was that such involvement provided researchers in the School with a 'public face' through which they could promote their particular expertise. At this early stage in the Unit's development, funding was difficult to attract because, in some of the leading edge areas of inquiry, there was a lack expertise in the existing peer review structures.

The Unit leader would not presume to speak for anyone else's commitment to involvement in the present study. For this reason, each participant researcher had to be approached individually to take part in the study. The *legitimate* organisational structures in this research environment mirrored long-standing communication pathways within the School, rather than organisational hierarchies. This was the only research leader, among the five groups participating in the present study, who requested from the author a research plan demonstrating the nature and level of involvement that would be required of participant researchers. In the request for the

research plan, this leader commented that, ‘You are not going to be paying us are you’! Funding was an issue for this group, because lack of funds limited their highly valued, independence of action in research. For this reason, the level of *legitimation* afforded projects that gave control of funding to the researcher, far exceeded the status of those with limited authority and leverage in decision-making. Seed funding from the Unit was used explicitly to avoid the problems of the orthodox, bureaucratic grant processes, while at the same time assuring quality research through internal peer review process. The establishment of inter-organisational *communication* pathways for collaborative research was seen as an important research infrastructure, because such pathways prevented interference from university administration that could result in inter-organisational misunderstandings and disputes. At the local level, morning teas and Friday get-togethers involving the whole School served as information sharing forums and times in which differences and tensions could be resolved before they developed into larger disputes.

A policy of the Unit was to be as influential as possible with regard to public attitudes about issues in the field of biological sciences. In order to extend its *sphere of influence* in public understanding, many members of the Unit were very active with media presentations on a regular basis. Although the professional manager’s position was only short-lived, the strategies that this person introduced for developing industry linkages were central to the Unit’s newfound capabilities in establishing working relationships with companies.

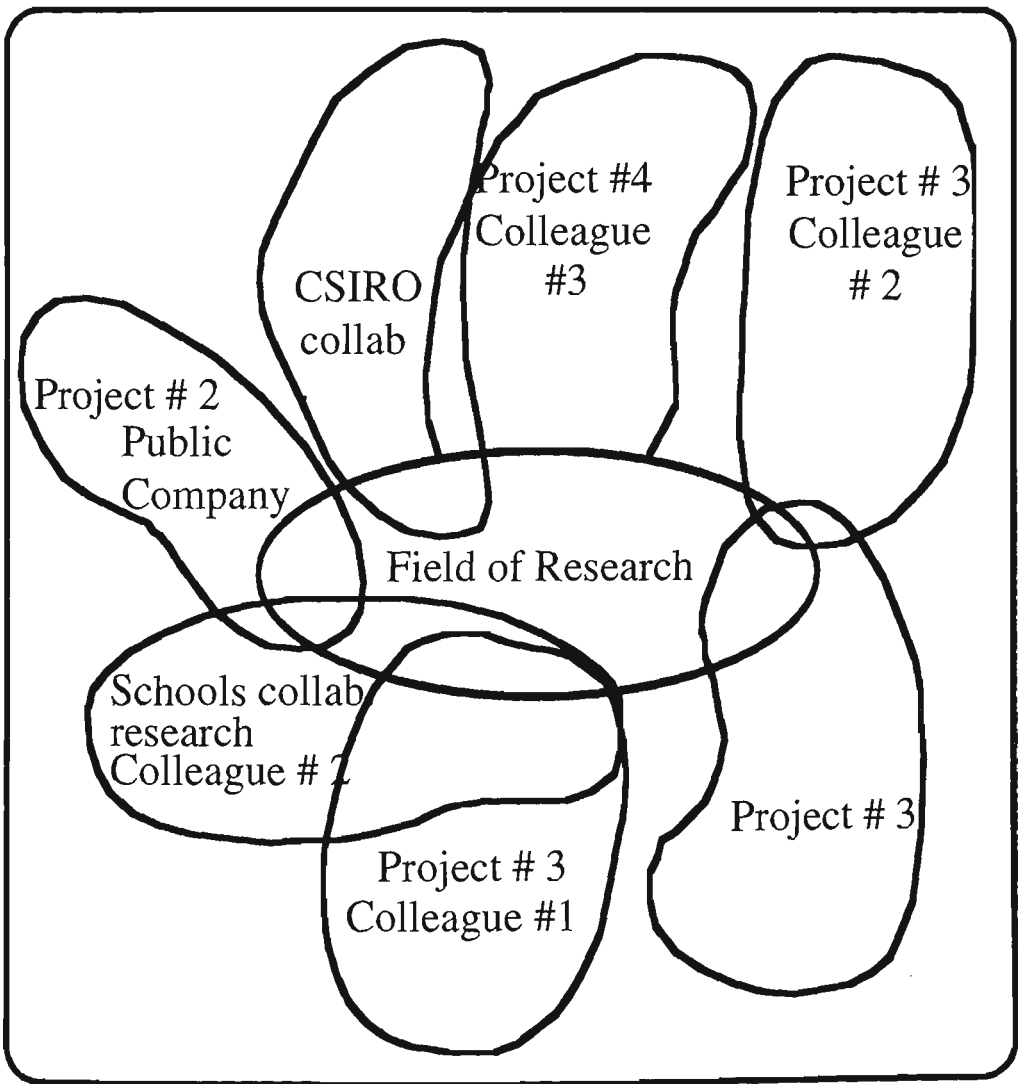
While the Unit had strong, supportive links with the commercial arm of the university, certain aspects of the host institution’s policies were proving problematic. This was particularly evident with the government-driven imposition of structures for research. While university administrators were trying to implement these structures, they appeared to have no real understanding of the ‘nature of the beast’, with the inevitable result that there was a mismatch between structures and research practice. The imposition of new structures had resulted in devolution of administration to the extent

that there were high levels of duplication across the institution and all academic personnel were now involved in increased administrative responsibilities.

**Group 4 : Conceptual Map of Research Space From the Perspective of a Lecturer-researcher**

Figure 10.8, a conceptual map provided by one of the researchers in this loose research collective, demonstrates the way in which the research space is organised around problem-based, research interests. In particular, the map conveys the interdependency between specialisms within the field, and the challenge that this type of involvement might present for organising and managing research practice.

**Figure 10.8 :** *Group 4 Research Space From the Perspective of Senior Researcher*



In a later iteration of this conceptual model, this researcher superimposed four, overarching research interests. In the map in Figure 10.8, Project 1 involved three specialisms, some teaching commitments and funding from a public company. Project 2 included one specialism from another university, two other specialisms within the department and two industry partners. Project 3 was undertaken by three colleagues in different specialist areas and was funded by a public utility. Project 4 required the knowledge bases provided by two different specialisms, a government research laboratory and a collaborative partner in another state.

One of the striking aspects of the conceptual map in Figure 10.8, is the power of a biological metaphor in conceptualising research pursuits. Gone are the boxes and the arrows of organisational and conceptual structures. Instead, the map is one of dynamic and interrelated activity for research, conceptually and philosophically in accord with the participant researchers' guiding principles for research practice.

#### **GROUP 5 - HUMANITIES (APPLIED RESEARCH)**

Group 5 participants originally included four researchers and three administrative staff. During the present study, one of these administrative staff and one researcher left the Centre. Further, one of the two researchers remaining with the Centre was absent for some time due to illness or study leave. Three of the remaining four personnel (two researchers and one of the administrative staff), were unable to keep appointments due to pressure of work. The researcher absent due to illness was so pressed for time upon return to work that appointments had to be cancelled, although they had been rescheduled a number of times. The only sustained contact with this group throughout the present study was with the General Manager Operations, who had been appointed to facilitate improvements to organisational structures, infrastructures and management practices,

following a review commissioned by the Centre. None-the-less, initial discussions generated a rich source of information about an R&D organisation undergoing significant changes in a context of excessive demand for its services.

### **Group 5 : Activities that Describe the Organising of Action for Research**

Group 5 was a well-established, high-profile Cooperative Research Centre. Initial contact with this group was made through staff with a specific responsibility for research within the Centre's activities. While the overall *management* structure of the Centre was mapped out, in official documents, as an holistic integrated network of related functions, in *practice* its organisational arrangements proved to be fragmented and problematic. The Centre had experienced rapid and substantial growth since its establishment and, with this growth, the different functional sections and relationships between sections within the organisation, had been subject to pressure and change.

For the purposes of the present study, management of the Centre need to be distinguished from management of the professional development and practitioner/researcher programs. On the one hand, the Centre worked to a negotiated *Management Plan* and judged its success on the basis of performance indicators identified by the respective organisational Sections. On the other hand, *management* of the researcher/practitioner research and development programs was reliant on subtle strategies used to influence the directions and progress of practitioner-researchers. Research was defined, therefore, in terms of the practitioner-researcher programs supported by the Centre. The researchers involved in the present study were the research coordinators who had only limited time for their own research pursuits. The research activities undertaken by these research coordinators were often those involving high pressure contract work required by funding bodies. In spite of their

very demanding workload, all researchers were also expected to maintain their normal academic duties.

With such large numbers of people involved in the practitioner-researcher programs, the collaborative decision-making and consensus politics, highly valued by the research coordinators were, in *practice*, very difficult to achieve. From both research coordinators' comments, there was a strong sense that research activity was 'embroiled in chaos of unending demands' with limited support. However, professional development seminars for research co-ordinators, that had lapsed because of lack of time, were recently reintroduced into the Centre programs.

The *leadership* role for the overall Centre was entrepreneurial and 'opportunity-oriented'. Leadership activity was connected to the research function only by way of organisational structure and major contracts. The Centre had Australia-wide involvement in, and responsibility for, development programs in the field, and included a Master of Arts program in a number of capital cities.

The intensive activity involved in research and development cycles, for the many practitioner-researcher projects, meant that the research coordinators had little or no time to follow their personal research interests. *Human resources* were generally stretched to the limit with project supervision, editing, publication and promotion activities. Although less than half the Centre's *funding* came through national programs, the fact that the national funding bodies had themselves undergone major restructuring, greatly heightened uncertainty about funding arrangements in this field of research. The funding that was available was often tied to non-negotiable deadlines and volatile political agendas.



## **Group 5 : A Language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

Because of the nature of the *knowledge* and the applied focus of the research, the Research Section of this Centre was committed philosophically, to participatory, action researching approaches. The research program involved practitioner researchers in contexts of application. None of the research undertaken was amenable to lock-step procedures, so a deal of individual attention and commitment was required by research coordinators. *Theoretical* and philosophical issues were dealt with in a book published by the Director of Research and Development, as well as in protocols and information guides to research produced by the Centre. Much of the *publishing* activity, however, was related to practitioner/researcher projects and involved the research coordinators in researching, editing, publishing and in-servicing over the three-year research cycles. Publication in easily accessible and understandable formats was central to purposes being served in the practitioner-researcher program.

The single most important researching *capability* development was, at every stage of the project, for research practitioners to achieve conceptual clarity about what they were doing. While some researcher/ practitioners took part in research training courses, generally, they tended not to have a background in research methods or research *skills* and needed ongoing assistance in clarifying objectives, project planning and research procedures.

## **Group 5 : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research**

Although the philosophy of the Centre was founded on collaborative action researching approaches, this type of interaction appeared, in practice, to be both difficult to

organise and demanding in terms of the demand on people's time. The research *activity* carried out in the research section involved approximately thirty projects, and the demands for support were great. The *rewards* for effective research practice were seen by the research coordinators as the empowering of practitioner/researchers and being 'the leading research organisation' in the field. The new Operations Manager on the other hand, understood the rewards as 'achieving market success' through publications for use in the field. The research *activity* of researcher/practitioners, because it functioned as a self-improving system, was seen to be self-justifying for *legitimation* purposes. Accountability requirements, however, did take up a lot of time and a great deal of documentation was generated in order to give an explicit account of the Centre's activities. Much of this information was required by the Centre's funding bodies.

A key, but subtle feature of this group, was the very firm demarcation of roles, functions and responsibilities. Offices were personal territories and there seemed to be little *communication* between them. The research section's *influence* on professional practice was possible because it took major responsibility for researcher/practitioner development programs, but this was only one aspect of the Centre's activities. The main clients of the Centre were Government, the university and practicing professionals in the field, so the Centre did have an ongoing input into understandings in the field and access to forums in which it could promote its public profile. In spite of a strong demand for commissioned research in a 'booming market', it became evident that the university recruiting system could adversely influence the commissioned research activities of the Centre. This was because university recruiting policies were not geared to the immediacy of the personnel requirements of customer-oriented, research pursuits.

## **Group 5 : Conceptual Map of Research Space From the Perspective of Research Administration Support Staff**

None of the three researchers who participated in the initial discussions was interested in drawing a conceptual map of their research space. It may have been that the official maps, acknowledged as having little relevance to actual practice, dissuaded these participants from engaging in such an activity. However, the administrative assistant for research interviewed at the time, did use mapping as a way of trying to articulate the hectic and very demanding activities of this Centre (see Appendix 8.1). It was not long after the initial discussion, however, that this participant accepted a position elsewhere. The research space is represented in terms of related functions and strength of communication pathways. While the role this person played was one specifically oriented towards administrative organisation and communication, the effort involved was quite demanding because of the complexity and breadth of services provided by the research section.

### **RESEARCH MANAGEMENT UNIT**

Those personnel from the Research Management Unit (RMU) involved in the present study were the Deputy Vice Chancellor Research who was the Head of the Unit and the Administrative Manager.

### **RMU : Activities that Describe the Organising of Action for Research**

One of the main functions of the Research Management Unit (RMU) at this institution was, through its *management policies and practices*, to facilitate the achievement of research goals set by the academics, and to assist academics in their performance. The quality of the relationship between the Unit and research researchers, whatever the

organisational arrangements for their research pursuits, was an important precondition for achieving this goal. For this reason, the Unit had taken very definite steps towards differentiating their function from that of the Research Committee, whose function was to allocate research funding within the institution. This differentiation was reinforced continually with the research community, in order to assure researchers that the Unit was there to facilitate their effective practice, and not to act in judgment for resource allocation purposes.

Institutional Research Management Plans at this university were ratified through collegial processes and were inclusionary rather than exclusionary, even though this practice proved to be problematic at times. While there were 'rules' of a sort in the Research Policy and Grants Guide, these were applied with a pragmatic attitude of respect for academic independence. The RMU relied on establishing and maintaining a positive working relationship with researchers within the institution rather than imposing administrative or bureaucratic rules.

The *leadership* tradition in research, at this institution, had been one of consensus-based decision-making. This tradition had been initiated through the activities of outstanding researchers within the institution's academic community. The strategic action of the university administration in splitting research and postgraduate studies posed a problem for the research community. This new structure had affected adversely, postgraduate training within the university. Another concern for the RMU, in its efforts to create a motivating research environment, was the absence of *human resources* policies for career advancement which meant that the institution had no lever to retain the services of top researchers.

Institutional *funding* for research had, since the early days in this university, been organised around a merit-based, competitive funding system geared to supporting

research excellence. This meant that when the Department of Employment, Education and Training (DEET) brought in a competitive research funding system linked to research infrastructure entitlements, there were already well-established competitive grant application capabilities in this institution. The institution could, therefore, respond effectively to funding policy changes. The Research Management Unit saw this as a partial explanation for the institution's success in ARC grants in 1984 -1985. Enabling researchers to get to the point where they could apply for external funds, and more specifically, competitive research funds, was a central pillar of the institution's internal research funding policies.

### **RMU : A Language to Describe the Way in Which Valid Action for Research is Framed in this Field of Research**

From a research management perspective, the purposes served by activities in the different areas of *knowledge* pursuits, needed to include a scholarship role. Academics were seen to be the keepers and protectors of the intellectual integrity of a subject area, and it was in this regard that academics had an obligation to their *knowledge base*.

### **RMU : Social Relations that Shape the Meaning and Value of Action for Inquiry in this Field of Research**

The *reward system* for research in this institution was based on merit because merit-based allocation of resources was seen as beneficial for ensuring the quality of research practice.

Members of the RMU were regarded, by those within the research community, much more as *legitimate* colleagues rather than representatives of the administration. The

Deputy Vice Chancellor research was held in high regard, both because of his advocacy for and commitment to research pursuits and his personal track record in research. Furthermore, the Administration Officer had completed a PhD and believed that his academic background enhanced his sensitivity towards the concerns of researchers. None-the-less, researchers were required by the RMU, to demonstrate that their research centres were *legitimate*, productive organisational structures for research in terms of both merit and performance.

*Communication* with the Research Committee, regarding performance on internal research applications, was expected to be initiated by the researcher concerned. Other than this, there was only a one-line form letter that was returned to applicants. Those who wanted to improve their performance by accessing reviewers' comments, had to write to the Committee or speak to a Committee member.

While the research-related sections of the institution were considered to be far less dominated by regulations than other areas of activity which were governed by the Act of Incorporation, the RMU believed it was desirable for research activities be *influenced* by some regulations. The research management strategies at this institution relied on a combination of 'carrot and the stick', with seed grants to reach a level of capability sufficient to attract external funding, rather than prescription and administrative control.

### **Methodological Implications of Case Report for Development of a Framework for Quality Appraisal of Research Practice**

The five research groups participating in the study provided a diverse range of research contexts. However, the common ground in terms of Domains and Sectors of activity for

research, was demonstrated in the activities, noted in italics, that constituted research practice. From this information generated in Phases 1 and 2 of the present study, it was evident that for quality appraisal of research to be grounded in research practice, an action-oriented framework capable of incorporating and condensing the diversity of research activity, such as that outlined in this chapter, was required. Such a framework could to be grounded, as demonstrated in this chapter, in the ‘mental maps’ of research practice that individuals construct as their own reference systems for day to day activities in research as a sphere of social life.

During Phases 1 and 2 of the study, it became apparent that the statements provided by participants with administrative responsibilities, were qualitatively different from those of the researchers. As the role of administrative personnel was primarily that of organising activity for research, their claims, concerns and issues tended to be oriented much more towards the interface between research practice and institutionalised, or the institutionalising of, systems of action. The implications of this insight will be discussed in the following chapter because it was in Phase 3, in particular, in the analysis of weighting profiles, that this insight emerged as a significant factor in the design and implementation of the quality appraisal tool.

The type of information generated in the practical reflective activities of Phases 1 and 2, described in this chapter, opened up the possibility for quality appraisal based on understanding of the *meaning* of action at the level of research practice. The meaning of action was shown to be intimately related to, and definable by, the purposes served and it was these purposes that were expressed as the sector labels in the appraisal framework. In effect, these purposes provided the elements of an action-oriented framework for quality appraisal of research practice.

The case report is evidence that the meaning of action for research, organisational, conceptual or social, can be mapped as the basis for quality appraisal practices thus assuring the efficacy of an action-oriented framework. The following chapter demonstrates how this type of information, generated in practical reflective action, could be presented in grid format and used as a resource for judging the value of action for research.



## **CHAPTER 11**

### **INQUIRY OUTCOMES PHASE 3 - AN APPRAISAL TOOL BASED ON THE VALUE OF ACTION FOR RESEARCH**

This chapter provides examples of Phase 3 inquiry outcomes. These outcomes demonstrate the products of higher education research that are currently ‘invisible’ because of the nature of accepted quality appraisal practices. This invisible product is the metalearning about the value of action for research that underpins the sustainability, development and renewal of researching capabilities. Information that describes the metalearning taking place in research practice is provided in the form of action profiles generated through the critical reflective inquiry processes of the present study. The profiles provide in-depth, qualitative and quantitative information about the value of action for assuring quality research practice. By objectifying, with a weighting process, what is valued in research practice at the level of theory-in-use, this study demonstrates the type of information that is required to address the inadequacies of current reward and legitimisation systems which are oriented entirely towards performance-based measures. Subjective validity claims about the value of action for research are illustrated with directly observable, accessible and publicly testable data, in the form of qualitative and quantitative action profiles.

#### **Phase 3 Project Feedback Summaries - Action Profiles for Effective Research Practice**

Using a weighting process as a tool for critical reflective appraisal, participant-researchers were able to indicate explicitly in the present study, the importance of elements of action for their research practice. When their descriptive statements were ordered according to the weightings which they attributed, the sorted profiles of individual statements and aggregate Sector weightings could be used by the author to

explain and to justify why, and to what extent, a particular sector of activity was effective or ineffective, in terms of research practice. The *Project Feedback Summaries*, completed by the author and documented in this chapter, serve to substantiate the central proposition of the present study. This proposition is that subjective validity claims can be used as a resource for articulating and sharing metalearning about effective action for research. It is this metalearning which defines the participants' standards for effective research practice, at the level of theory-in-use. From the perspective of PCT, such standards are grounded in the participant's personal construct systems.

It is important to note that these project feedback summaries were generated by interpreting the qualitative descriptive statements about the meaning of action for research in combination with the quantitative weightings, that indicated the value of the action for research. While it was not possible within the page limitations of the current thesis to present the quantitative data side by side with the qualitative, the reader is encouraged to view the two sets of data as an integrated whole.

The individual project feedback summary profiles of research environments, used as illustrative examples in this chapter, were drawn from two groups involved in the study. These were Groups 2 and 4. They were selected for reporting purposes, because they, in particular, best demonstrated the potential of the appraisal tool for enhancing understanding about the nature of quality research environments in different contexts of research. The total number of feedback summaries completed and returned to participant-researchers by the author was 17, including the one to the RMU representative. The number of Summaries completed and returned Administrative personnel was 4. In effect, these project feedback summaries were the case reports of the critical reflective inquiry, by the author, generated for each of the respective participant-researchers. The different sections of project feedback summaries and the participant-researchers to whom these summaries, or sections of summaries were returned, are listed in Appendix 23.

The first example of a Project Feedback Summary was taken from Group 2 while the second was taken from Group 4. The research activity of Group 2, it will be remembered from Chapter 10, was located in the field of Information, Computing, Communication Technologies and General Engineering. It may be useful for the reader at this stage to return to Chapter 10, in order to review the activities, practices and social relations that constituted research practice for this group. One of the distinctive features of this group was its research management policy, which was directed towards securing resources and providing conditions for the development of talented young researchers. Standards for effective research practice, expressed by one member of this group, were provided in the following qualitative and quantitative profiles.

### **Profile of Standards for Effective Research Practice in the Organisational and Managerial Domain of Action for Participant-researcher #1, Group 2**

For the purposes of explanation and demonstration, the information included in this first part of the chapter, is that from the *Project Feedback Summary* of participant research #1 in Group 2. The Organisational and Managerial and Social and Communicative domains are the sections of participant-researcher #1's project feedback summary that are discussed.

All statements in Table 11.1 are from the Organisational and Managerial Domain of action. In the action-oriented framework generated in the present study, this Domain of action includes the six sectors that relate to 'organising' of activity and conditions for research. These sectors are:

- Research Management Policy Statements.
- Research Management Practice Statements.
- Leadership Policy Statements.
- Leadership Practice Statements.
- Human Resources Policy and Practice Statements.
- Funding Policy and Practice Statements

By way of illustration, an example of the data grid from which the Project Feedback Summaries were derived, is provided in Table 11.1. This Table includes only those statements and weightings for Sector 1, of participant-researcher #1's Quality Research Environment Profile in the Organisational and Managerial Domain (Org).

**Table 11.1 : Quality Research Environment Profile, Group 2,  
Participant-researcher #1**

Domain	Original Number	Indicator of type of activity or activity patterns	Constr / Facil	Sector of activity	C Wt	F Wt	Level of Tens	Tens Bias Pos/ Neg
Organis	13	Peer review of research applications (a la ARC) places great demands on reviewers and there are better schemes for funding allocation	C	1	1		0	0
Organis	18	Intervarsity experience can be a constraint in terms of effective research for postgraduates	C	1	4		0	0
Organis	16	The possibility of the PhD encourages really top students to come into the research projects as professional assistants	F	1		1	0	0
Organis	6	Involvement for postgraduates in research institutes with good infrastructure and real problems enhances effective research	F	1		3	0	0
Organis	7	Junior researchers are better because they have more energy and are less 'moulded'	F	1		3	0	0
Organis	8	Strategic action is required to get the right balance between experience gained outside academia and useful attitudes and approaches to research	F	1		3	0	0
Organis	14	Researchers should establish the value of their research in the context of broader national and industry goals	F	1		3	0	0
Organis	2	Involvement in active research projects is the means by which students are able to develop a meaningful PhD. question in an area that interests them	F	1		4	0	0

**Table 11.1 Continued**

Organis	3	Postgrad researchers should have the same status as staff and be paid appropriately for their involvement if susceptible to such an offer, but the extent varies by individual	F	1		4	0	0
Organis	4	If postgraduate involvement in research projects allows for shaping of appropriate attitudes to research this can facilitate effective research	F	1		4	0	0
Organis	12	A research program that is well funded with appropriate infrastructure and computing network connections is necessary so that the work of individuals will not be lost	F	1		4	0	0
Organis	15	Only the really exceptional students will be accepted in research projects without having had work experience first	F	1		4	0	0
Organis	17	Engage with international companies whose research programs are relevant to ours	F	1		4	0	0
Organis	1	Strong undergrad degrees build a broad base from which to appreciate what is needed for research	F	1		5	0	0
Organis	5	Research and research programs need to be highly goal-oriented and to focus on producing results	F	1		5	0	0
Organis	9	If the encouragement and funding of collaborative research gives young researchers access to specialised training and experience - this type of research is a resource for developing young researchers	F	1		5	0	0
Organis	10	The provision of an environment in which people will respond is necessary if their potential as researchers is to be tapped	F	1		5	0	0
Organis	11	Undergraduate courses must prepare students for a lifetime of work - as opposed to transient education	F	1		5	0	0

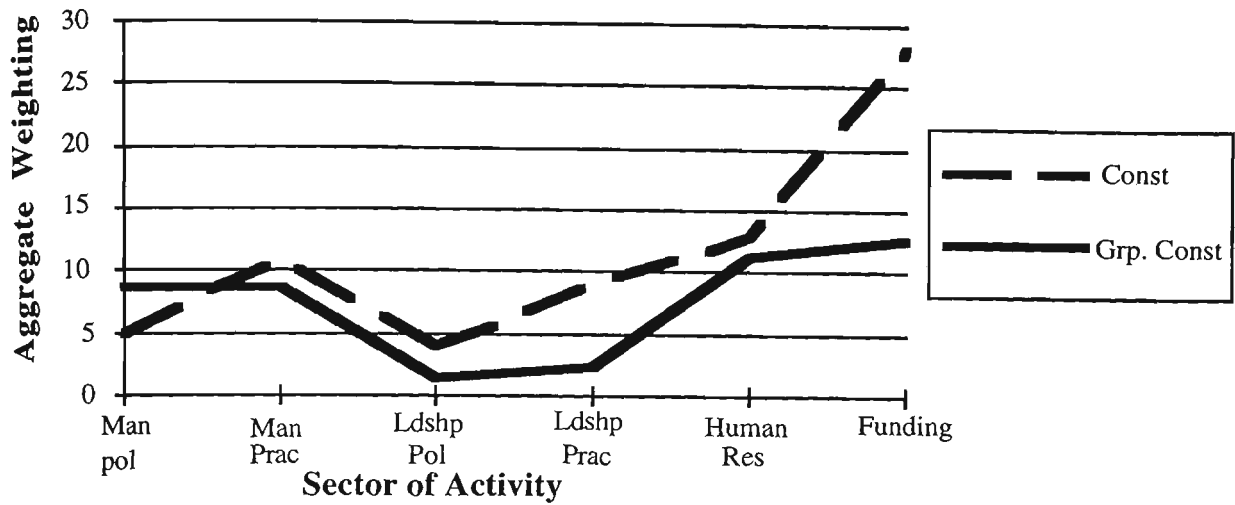
These ordered, descriptive statements, about the meaning of action that is valued in research practice, were used together with the aggregate weighting profiles for constraint, facilitation and tension in Figures 11.1, 11.2 and 11.3, to generate the *Project Feedback Summary* for participant-researcher #1 in Group 2.

As explained previously in Chapter 9, Sector weightings are an aggregate of the individual statement weightings for constraint, facilitation and tension, attributed by the participant-researcher concerned. Figures 11.1 (Constraints), 11.2 (Facilitation) and 11.3 (Tensions) respectively, were generated from the *Quality Research Environment Profile* and demonstrate the first level of aggregation in the appraisal tool, for weighting the importance of action. The first level of aggregation was calculated in order to provide the respective sector weightings for the individual participant-researcher.

The second level of aggregation of weightings in the appraisal tool, was that in which the respective sector weightings for all participant-researchers in a group, for constraint, facilitation and tension, were aggregated to generate group averages for sector weightings. The following Figures, therefore, are an indication of the levels of constraint, facilitation and tension for participant-researcher #1 in Group 2, compared with the levels experienced across the group. The *Project Feedback Summary* section which accompanies Figures 11.1, 11.2 and 11.3 in *Feedback Summary A* is, however, only that for participant-researcher #1. An in-depth explanation of the Individual Group Comparison, using the Group average Sector weightings, is provided later in the chapter.

Action that constrains research in the Organisational and Managerial Domain, is that which tends to work against effective coordination of activities, therefore undermining the social integration necessary for sustainability and renewal of research practice. The levels of constraint for participant-researcher #1, across the respective Sectors of the Organisational and Managerial Domain, are demonstrated in Figure 11.1.

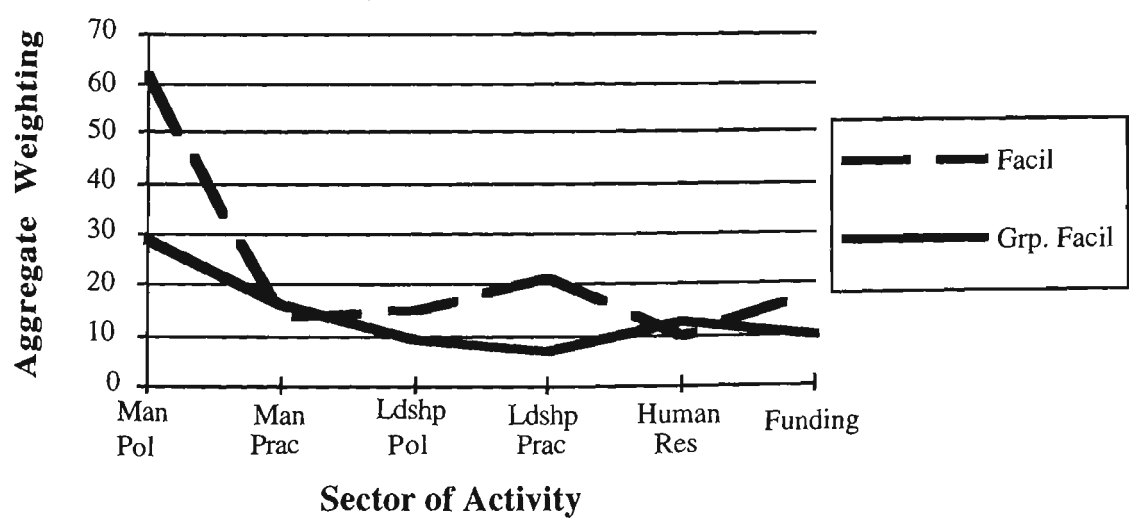
**Figure 11.1 :** *Organisational and Managerial Domain, Constraining Action for Research Group 2, Participant-researcher #1*



The level of constraint experienced by participant-researcher #1 in Group 2, across the six Sectors of activity, is represented with a dashed line. The level of constraint experienced by the Group in general, across the same Sectors is represented by a continuous line. While the pattern of constraint on effective action for research is similar for participant-researcher #1 and the group across the organisational domain, the area of funding is where the profiles diverge noticeably.

Action in the Organisational and Managerial Domain that facilitates research, is that which assures coordination of activities for research practice and therefore, effective, ongoing, social integration. The levels of facilitation experienced by participant-researcher #1, across the respective Sectors of the Organisational and Managerial Domain, are demonstrated in Figure 11.2.

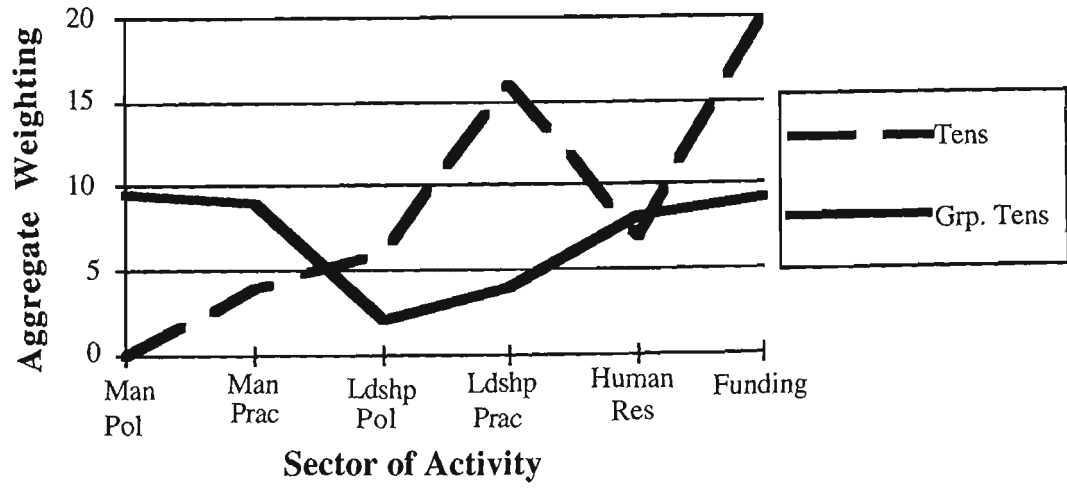
**Figure 11.2 :** *Organisational and Managerial Domain, Facilitating Action for Research Group 2, Participant-researcher #1*



The level of facilitation afforded research practice through Management Policy, is seen as very high by this participant and is reflected in the magnitude of the weighting on the vertical axis. The very high weighting for Management Policy activity, recorded for this participant-researcher (#1), is synonymous with their role of group leader. In this role, the central concern is organising the environment in such a way that it is highly facilitative and encourages people to respond to the research imperatives that are present. While others in the Group see Research Management Policy as highly facilitating, their aggregate weightings, as indicated by the Group average, tend to be of a lower magnitude. This sector of activity is of greater relative importance to the leader (#1) because the leader takes major responsibility for creating a supportive environment in which group members work.

Tensions in the Organisational and Managerial Domain arise because of the unresolved conflict between established ways of coordinating action and those needed at the level of practice, for effective social integration. In the *Quality Research Environment Profile* (Table 9.4 in Chapter 9), tensions provide a window into ‘gaps’ between the theory of action that is currently organising research and the theory-in-use, that is effective action for research. As such, tensions signal the need for more sophisticated ways of construing the constraining and facilitating aspects of action associated with the particular activity or circumstances, for effective research practice. The levels of tension experienced by participant-researcher #1 are demonstrated in Figure 11.3.

**Figure 11.3 :** *Organisational and Managerial Domain, Tensions in Action for Research Group 2, Participant-researcher #1*





The tensions, indicated by the magnitude of the vertical axis in this graph, are low or in the case of participant-researcher #1, non-existent. The differences between the individual and group profile for levels of tension across the Sectors, can be explained once again by the fact that #1 as the group leader, takes major responsibility for both research leadership and attracting funding. The following evaluative summary in *Feedback Summary A*, compiled using #1's ordered statements (meaning of action) in combination with the weighting profiles (value of action) in the three graphs, provides an in-depth explanation of these profile differences.

The section of the project feedback summary for participant-researcher #1 in Group 2, presented in *Feedback Summary A, Group 2, Participant-researcher #1*, provides the author's individual case report on participant-researcher #1's judgments concerning the value of action for research. The evaluative profile sets out the standards by which this researcher judges if organisational and managerial action in the respective Sectors supports or undermines effective action for research in the Organisational and Managerial Domain of action.

### ***Feedback Summary A - Group 2, Participant-researcher #1***

#### ***Individual Profile, Organisational and Managerial Domain of Action***

##### **Sector 1 - Research Management Policy Statements**

Research management policy statements are defined as those which represent the participant's beliefs, values and understandings about the organisation and management activities that are appropriate for research activity. These statements can be expressed as 'if - then' statements. If 'X' IS the case, then this will facilitate research. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This sector is seen as providing a high level of facilitation for research activity. Involvement of young and energetic postgraduate or potential postgraduate researchers in research programs, both inside and outside academia is seen as a strategic necessity. This is because their relevant industry-based and academic research experience leads to effective and

meaningful research and the development of appropriate attitudes and research capabilities. The importance of strong undergraduate degrees to underpin research training is also seen as highly facilitative.

Effective research activity involves a strongly goal-oriented approach which is focused on results and is well-funded with appropriate infrastructure. Relevant international programs or collaborative research activities which provide young researchers with access to specialised training and experience, are an important resource for developing research capabilities. A highly facilitative research environment is one which encourages people to respond in an appropriate way so that their potential as researchers is tapped and the experience prepares them for a lifetime of work rather than transient, short-term gains. Your weightings indicate that this is the case in this department.

Constraints are present in this domain but these relate to the external environment and the demands, or lack of appropriate demands, for effective research activity. The demands of ARC peer review responsibilities, when combined with the ineffective funding allocation scheme which these activities serve, presents a low level of constraint on effective research activity. Of greater importance is the poor quality research experience of postgraduate students involved in intervarsity programs. By contrast, the quality of the experience and the recognition of student researchers in the programs offered by this research group, are seen to be much more facilitative. This is with regard to both status and remuneration.

## **Sector 2 - Research Management Practice Statements**

Research management practice statements describe what actually happens in the organisation and management of research. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

The weightings attributed to constraints in this sector are related to practices which impact on your personal research space rather than the research training environment in general. The management strategies that you have adopted for your research responsibilities and administrative load are either constraining, or of a relatively low level of facilitation. However, those strategies which relate to the facilitation of young researchers appear to be more positive. These positive strategies include: engaging superior students as part-time professional assistants in current research programs, employing talented students in research programs

to encourage them to enroll in a PhD, and employing talented students until they develop their PhD topic and then supporting them to 'go for it'. The contract research funds which you attract enable you to supplement departmental funding to make this strategy possible. However, there is a down-side to this, which is that you must attract the contract funding or the strategy cannot be financially supported and this creates tension. There is a positive bias to the tension though, which would indicate that the benefits outweigh the drawbacks.

### **Sector 3 - Leadership Policy Statements**

Leadership policy statements are defined as those which indicate the source of, and opportunities for, leadership to emerge within the group. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

The weightings which you attribute to conditions in this sector indicate that the specific targeting of the degrees offered in terms of entry criteria, content and student outcomes is important to academic leadership policies which facilitate effective research activity in this field.

There is quite a high degree of tension in this sector, however, related to the provision of opportunity for PhD students to explore their own ability in a fairly protected environment. This tension has a negative bias which indicates a need to ensure that these circumstances provide for a generally creative and productive tension rather than a constraint on effective research activity within the Department.

### **Sector 4 - Leadership Practice Statements**

Leadership practice statements are defined as those which acknowledge the forms or styles of leadership which are seen to be present in the research space. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

While this sector of activity provides a good level of facilitation, there is a high degree of tension generated by the demands of the leadership role. The involvement of prospective doctoral candidates in research projects facilitates an appropriate research topic choice for less experienced researchers. The publication activity of the research leader could strengthen the reputation of the

group in the field and facilitate the development of the whole group, however, this has not, until recently, been a leadership priority.

The high degree of tension experienced in this area is due to the fact that the major part of the research is, in practice, driven by the group leader. While the seven year plan facilitates effective research activity it is also equally constraining. If the degree of tension could be reduced, this plan could become facilitative and productive. However, the level of tension experienced in the current circumstances indicates the need to reduce the demands on the leadership role, re-focus desired goals or reconceptualise projected milestones.

## **Sector 5 - Human Resources Policies and Practices**

Human resources statements are defined as requirements and expectations in relation to human resources, including roles and responsibilities, career pathways or options available, personnel selection criteria and protocols. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This is one of the least facilitative sectors for effective research activity. The constraints combined with the degree of tension tend to outweigh the facilitating aspects afforded by the human resources circumstances. The fact that PhD. candidates have taken up the opportunities offered by the Department is facilitating. However, the staff numbers available to service the research interests of the Department and the strong tendency of Australian students in this field not to go into research, constrains effective research activity.

Student expectations for a course that is both a ticket to employment and an intellectual challenge does appear to provide the potential, if not fully realised, for a creative and productive tension in terms of course design.

The need for frequent overseas trips is a tension that affects the research leader directly in terms of research activity. Major responsibility for this aspect of research activity generates a tension with a negative bias. This bias indicates the need for strategies which capitalise on the potential contribution of other members of the research team within the Department to reduce the demands of the leadership role.

## **Sector 6 - Funding Policies and Practices**

Statements which refer directly to funding: sources, levels, mechanisms, priorities and infrastructure are included in this sector. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This sector of activity provides both the highest level of constraint and the highest level of tension for all sectors in the Organisational and Managerial domain. The purely facilitating activities or conditions are limited and relate to two aspects of funding. The first of these is the provision of funding for small projects by the relevant professional association, on publication criteria. Funding of small projects in this manner does facilitate research in the field. Secondly, the flexibility that is sometimes possible within the Department to contribute workyears to collaborative projects with industry, is also supportive of effective research activity. The latter is quite important when it happens.

Industry funding cycles combined with the uncertainty of continuing commitment from industry sources to research programs, makes this avenue of funding constraining rather than facilitating. This situation is further compounded by the insufficiencies of the Australian Government funding mechanisms for research when compared with international funding models and the dollar ceiling on the growth of the group. The growth of the group would be possible if funding for employment of talented graduates was available through readily accessible Government schemes.

While collaborative research funding is available through established links with a large overseas corporation, the attached secrecy agreements which prevent publishing from the work generate a high degree of tension. The demands of grant application, management and reporting also create a high level of tension for the leader because these demands are added to the major responsibility which the leader accepts, for attracting research funding. Such funding provides for employment of full-time postgraduate researchers and, without it, there are constraints on effective research activity for the whole Department. The sometimes poor outcomes, in spite of provision of travel funds for these people to get the 'right kind of experience' in research, is a further tension in relation to junior staff.

Those sources of funding that provide the best financial support for talented postgraduate researchers in the group's research program, determine which activities receive top priority in the Leadership role, played by participant #1. This participant-researcher signaled (Sector 4) that the leadership role would have to be redefined because 'publication' was emerging as the means by which the reputation and development of the group would, in future, be strengthened. Previously, the coordination, and therefore social integration of the group, had been assured and sustained by this leader's ability to attract industry funding for research programs. It was only at the point of critical reflection in Phase 3 of the present study, that participant #1 added the statement concerning 'leadership; and 'publication', to the Leadership Practices category. The statement was provided by way of explanation, when the participant-researcher reflected on the nature of industry funding with secrecy agreements that prevent publishing, and the increasing importance of publication records in attracting ARC funding that could support postgraduate research involvement. Publication records had, in the past, been only a minor consideration, in the small-scale, research funding available from the industry-related professional association for this field of research. The high levels of tension experienced by participant-researcher #1 in the Leadership Practices and Funding sectors of the Organisational Domain, are indicative of this emerging need for different ways of construing both the leadership role and the priorities involved in responsibility for securing research funding.

During the final year of the present study, a new professorial position was created in the Department with which Group 2 was associated. This position was created in order to share the load and the responsibilities for leading and managing the Department. The strategic action, it was hoped, would address some of the issues raised in the Management Practices and Funding Sectors. The pressures in these Sectors, for the leadership roles were further emphasised in the individual-group comparison profile provided in *Feedback Summary B, Group 2, Participant-researcher #1*

*Individual-Group Comparison .*

## **Project Feedback Summary B**

### **Introduction to Individual-Group Comparison Profile**

The reader is referred to the Phase 4, data analysis section of Chapter 9, for a discussion regarding the rationale and protocol for *Individual - Group Comparison Profile*. The individual - group comparison, across each of the three domains of action, was provided in the *Feedback Summaries* as a description of the variation in facilitating conditions, and the level of impact of certain sectors of activity for particular roles or functions within the research space. The research space can be understood as a human activity system that is constructed and maintained through the actions and interactions of individuals. The information provided in the individual/group comparisons was intended as a resource for developing shared understandings about which activities were particularly supportive of which roles. It also offered a descriptive account of which roles could be better facilitated and what sectors of activity were most relevant to improved facilitation of research practice, for the particular context of research. The individual-group comparison summaries demonstrated how such a comparison of profiles could be used as a resource for negotiating shared situation definitions about effective or ineffective action for research. In fact, the individual-group comparison of sector weighting profiles proved to be the section of the *Project Feedback Summary* that attracted most interest from participant-researchers. For the Organisational and Managerial Domain component of the *Individual-Group Comparison Feedback Summary B, Group 2, Participant-Researcher #1*, the reader is referred to Figures 11.1, 11.2 and 11.3. For the Conceptual and Theoretical Domain feedback component of *Feedback Summary B, Group 2, Participant-researcher #1*, the reader is asked to turn to Appendix 24. Finally, for the Social and Communicative Domain feedback, the reader is referred to Figures 11.4, 11.5 and 11.6 in this chapter.

## *Feedback Summary B, Group 2, Participant-Researcher #1*

### *Individual-Group Comparison*

#### **Organisational & Managerial Domain of Action**

The most noticeable differences between your profile and that of the group are in the Management Policy, Leadership Practices and Funding sectors. Your weightings in the Management Policy sector indicate that you are conscious of a level of facilitation for research activity that is more than double that represented by the group average. Even though the Management Policy sector is weighted by the group as a highly facilitative sector for research activity, it is apparent when compared to the rest of the group, that your interests lie primarily in this sector of the Organisational and Managerial domain. While you do not mention any tension in this sector, it is evident that tension is present for some research roles within the group. While Leadership Practices are important in terms of your profile, this sector is not weighted as important for other members of the research group.

The weightings which you attribute to both constraints and tensions in the Funding sector indicate that this is an area of activity that is particularly problematic for you in your role. The level of both constraints and tensions in your profile is more than double that of the group average.

#### **Conceptual & Theoretical Domain of Action**

It appears that for this group, when it comes to research, Discipline Base activity rates as relatively unimportant. The absence of comment confirms the statements that describe this field of research as filling the middle ground or synthesising information from a number of other discipline areas. It appears also, that when facilitation of research is considered, Authoring and Publication of Knowledge are not a concern for most researchers in the group including yourself.

The Theoretical and Methodological Frameworks sector provides the most striking difference between your profile of claims and concerns and that of the overall group. There were no comments made during discussions that would fit this sector definition in your profile, but for others in the group this sector is weighted as important. Conversely, the weightings which you attribute to the Skills and Capabilities sector indicate that for facilitation of effective research activity, you in your role, consider this to be a very important sector while other researchers are less concerned with these issues.



## **Social & Communicative Domain of Action**

Spheres of Influence represents a sector of activities that is much more important to you in your role than it is to the group in general, and in particular the less well established researchers. Another difference between your weightings for Sectors and those of the group, is in the Reward Systems sector. While this is important to your role in terms of facilitation, it rates as being of little or no importance to the other researchers, however, there is for them, some indication of constraint and tension in relation to Reward Systems. Similarly, Legitimation Structures are of little or no importance to most researchers in the group including yourself, but there is some indication of a level of facilitation.

While Communication is weighted as very important to facilitation in your profile, this position is not the case for all researchers concerned. Yours is not, however, the highest level of facilitation listed for the group, so it appears that for some research functions, communication in this field of research, is very important.

A further demonstration of the metalearning about effective action for research that was generated using the appraisal tool, is provided in the following examples from the Social and Communicative Domain section of the project feedback summary for the same participant-researcher.

### **Profile of Standards for Effective Research Practice in the Social and Communicative Domain of Action for Participant-researcher #1, Group 2**

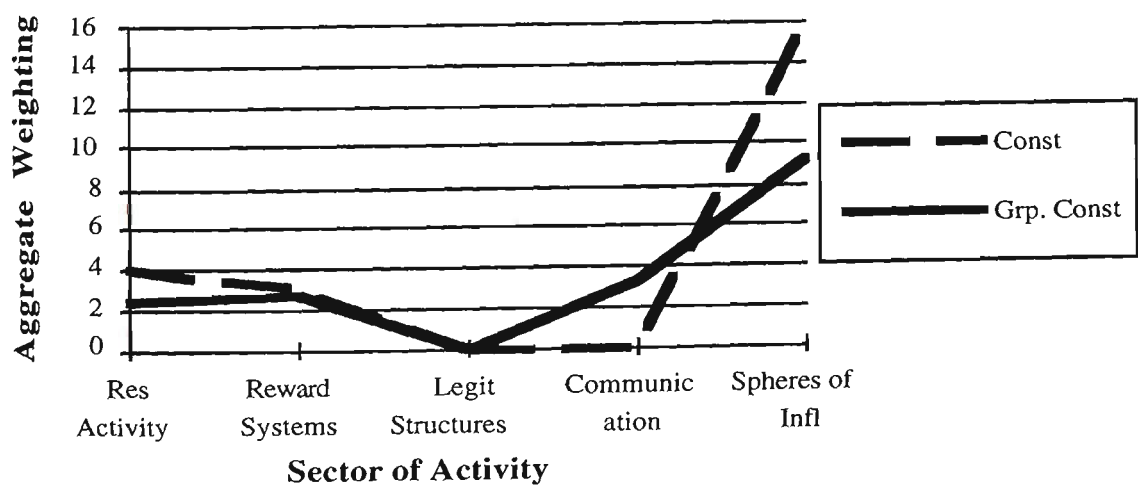
The Social and Communicative Domain of action involves the social shaping of activity that is valued in research practice and the value of research outcomes and agendas. The problematic nature of the relationship between effective action for research at the local level, and action that is valued at the broader institutional or policy levels, is demonstrated in the Social and Communicative Domain of Action for participant-researcher #1 in Group 2. There are five Sectors of activity in this Domain which include:

- Research activity
- Reward Systems

- Legitimation Structures
- Communication
- Spheres of Influence

The weighting profile for #1 in the Social and Communicative Domain demonstrated in Figures 11.4, 11.5 and 11.6, provides a quantitative overview of the patterns of constraint, facilitation and tension across the Sectors of social action. This Project Feedback Summary in particular, demonstrates the importance of treating qualitative and quantitative data as an integrated whole for quality appraisal purposes. As mentioned previously, the meaning and value of action for research are integrally related to the purposes served. For this Group, in this field of research, one’s status and sustainability are tied much more to Communication and Spheres of Influence within the realm of leading edge initiatives, rather than to academic Legitimation systems such as journal publication. Figures 11.4, 11.5 and 11.6, with their accompanying explanations, demonstrate how an holistic interpretive protocol can ensure that appraisal activities condense, rather than replace, the symbols of excellence in this field of research.

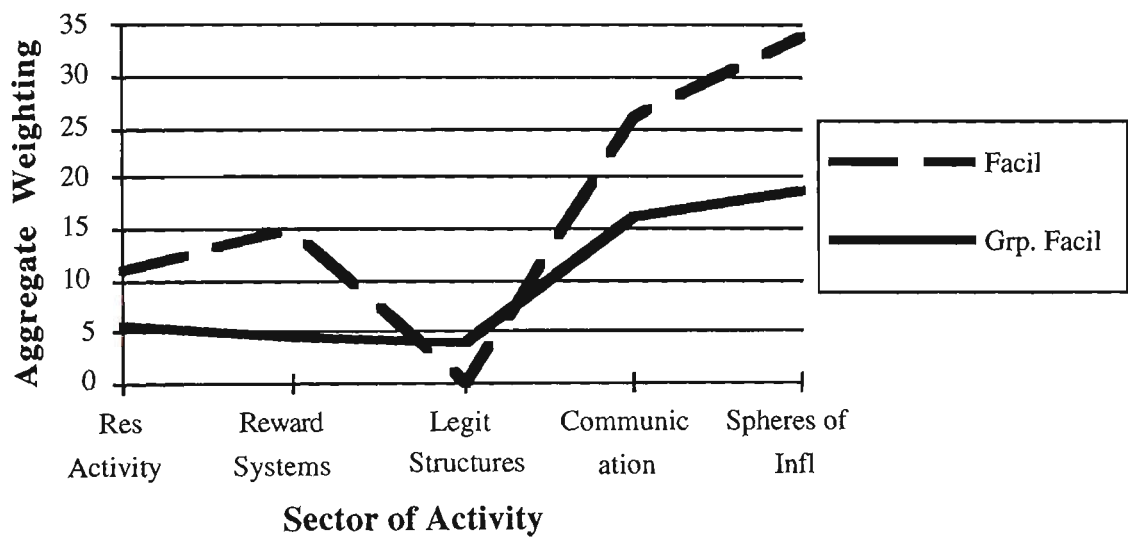
**Figure 11.4 :** *Social and Communicative Domain, Constraining Action for Research*  
*Group 2, Participant-Researcher #1*



The most notable weighting for an element of social action in participant-researcher #1’s profile, is the relative importance of Spheres of Influence. This high aggregate

weighting can be explained by the fact that status, in this field of research, is dependent upon one’s positioning in relation to the leading edge of innovation, which is always well ahead of journal publication rates.

**Figure 11.5 :** *Social and Communicative Domain, Facilitating Action for Research Group 2, Participant-researcher #1*

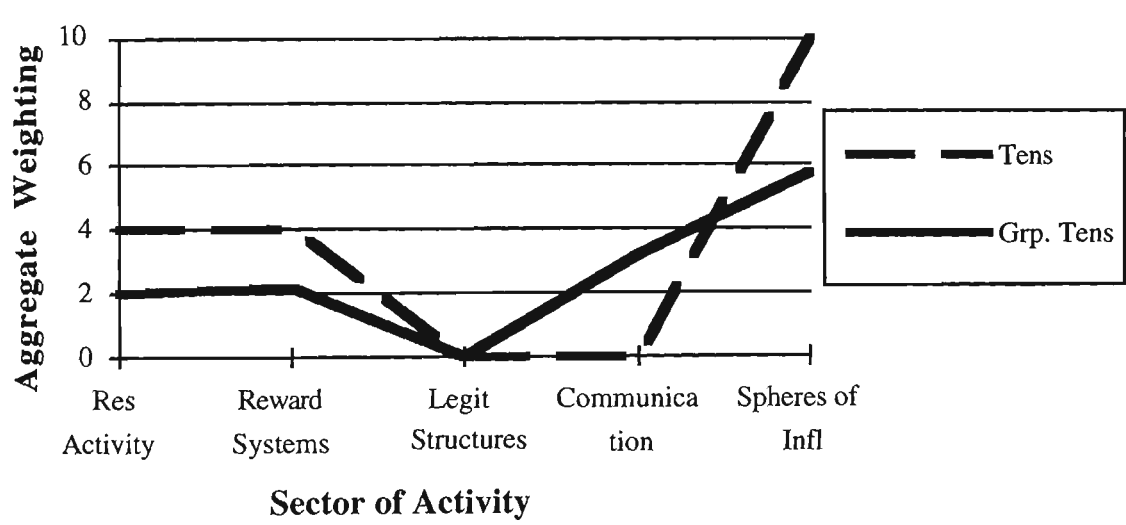


The means by which academic status is secured and sustained in this field is further reinforced by the fact that this participant-researcher made no statements about traditional symbolic structures that determine the source of merit and academic authority. Publication was mentioned in the context of Leadership and Funding and not in relation to research excellence and Legitimation per se. Legitimation is established in this fast-moving field of research by spending high quality research time overseas (Appendix 24, reader is asked to note Sector 5 in Participant-researcher #1’s Conceptual & Theoretical Domain). The contract research funding, which flows from the Leadership and Funding sectors of activity, provides the funding for high quality, postgraduate involvement in research programs.

From a broader perspective, the integrated development strategy of Group 2, described in Chapter 10, is also dependent upon the strength of personal connections and

collaborative networks, particularly with industry partners. In other words, the legitimization structures for Group 2 are quite at variance with emerging performance indicators based on publications and citations. In fact, because of secrecy agreements with some companies working at the leading edge of developments, publications are not even a consideration. It is the capabilities that are developed by individuals taking part in these collaborations that are of far greater importance to the group’s development strategies, although the cost in terms of tensions generated, for those involved, is quite high.

**Figure 11.6 :** *Social and Communicative Domain, Tensions in Action for Research Group 2, Participant-researcher #1*



Although the overall level of tension within this domain of action is low for participant-researcher #1 in Group 2, tension associated with the sector of Spheres of Influence is relatively high. This is because of the challenge involved in maintaining a positive balance between the advantages and disadvantages which accompany involvement with international industry partners.

The following section of the Project Feedback Summary for participant-researcher #1, in *Feedback Summary C, Group 2, Participant-Researcher #1*, provides an in-depth explanation of the standards for effective social action for research, that this participant-

researcher generated in the course of the present reflective inquiry. This project feedback summary is to be read with reference to the preceding Figures, 11.4, 11.5 and 11.6.

### ***Feedback Summary C, Group 2, Participant-Researcher #1***

#### ***Social and Communicative Domain***

##### **Sector 1 - Research Activity**

Research activity statements are defined as those which describe the nature of activities which fall into the accepted category of 'research', including processes and related purposes. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

Effective research is dependent to a certain extent on the preparedness of people to take weighed and measured risks. Research activity involves demonstration of openness, curiosity, a questioning approach and a positive attitude to one's own ability. The presence of such behaviours facilitates effective research activity. The type of research training that constrains research activity is that which relies on coursework. While a coursework PhD can ensure completion rates in a minimum time it provides neither the skills necessary to map out projects nor the ability to develop research schedules and to determine the resources required for a project.

Collaborative research projects facilitate research activity because they provide specialised training and, while there are some drawbacks, the tension which is present is creative and productive.

##### **Sector 2 - Reward Systems**

Statements included in this sector are those which describe the nature of available rewards and access to recognition. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

Facilitation is provided in this sector by the policy of paying a reasonable wage to graduates who have the potential and the desire to take on PhDs, so that they can be involved in the research programs. More important, however, is the combination of human, technical and product perspectives by graduates who are able to develop their creativity in the process of making money *and* feeling good about it.

### **Sector 3 - Legitimation Structures**

Legitimation structures are those symbolic structures which determine the source of merit and authority. Statements in this category refer to that which is considered worthwhile and therefore, valued. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

No comments recorded during discussions appear to fit this sector definition.

### **Sector 4 - Communication**

Statements in this sector refer to communication strategies, mechanisms, patterns, expectations and needs. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This sector of activity is entirely facilitative in terms of effective research activity. You have indicated by your weightings that not only is this one of the most highly facilitating sectors in this domain, but also, that there are no constraints or tensions. Facilitation is achieved through both active networking to judge where developments are going and the fostering of relationships with international companies for information sharing and the similarities between knowledge frameworks of this discipline and others. These factors increase the potential for interdisciplinary research.

Difficulty in finding the right point of connection with other disciplines, however, can mean that communication is not as facilitating as it might be. However, encouragement from the research leader for people to work together, does facilitate research and exchange visits with overseas utilities provide good international links.

### **Sector 5 - Spheres of Influence**

Statements placed in this sector are those which indicate levels of influence exerted in a particular relationship or environment. The direction of influence is described in terms of its source and its consequences. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

Your weightings indicate that while there is a high level of facilitation in this sector, there are also some important constraints. Regular travel for researchers to experience first-hand where the leading edge of research is going, is highly

facilitative. At the local level, the relatively flat management structure of the University institution has made it amenable to changes which facilitate this group's approach to research. Research activity is also facilitated by the flatter management structure because there are fewer bureaucratic impediments to communication and to action.

A fairly high level of tension is generated in one aspect of this sector because of the advantages and disadvantages of involvement with international companies. This tension is specifically related to the need for attaining a balance between short-term product-oriented outcomes and longer term goals. This tension can be transformed to a high level of constraint if the Department is unable to subsidise workyears for a project, in which case, the company involved becomes very prescriptive to ensure sufficient research time on task. A somewhat lower level of tension is generated within the institution, with the situation where the positions of both Head of both Department and Head of School is determined by an election process.

A great deal of time has to be spent in the University identifying and meeting multiple agendas. Multiple agendas arise because there is a misalignment between the University mission and objectives, and its delivery mechanisms. This situation is highly constraining in terms of effective research activity.

While the *Project Feedback Summary C* for participant-researcher #1, provides an explicit account of standards for effective social integration (Organisational and Managerial Domain), it also indicates where action is ineffective and undermining in terms of socialisation (Social and Communicative Domain). The generic categories or elements of Social and Communicative action, provide examples of ways in which the meaning and value of action are being shaped by current legitimation and reward structures. The categories provide instances, in feedback about Social and Communicative action, of mechanisms that either assure or undermine the socialisation processes necessary for effective research practice.

If researchers are to have a foundation from which to critically analyse the research policies shaping what is valued in higher education research, the present study proposes

that it will be necessary for them to make explicit what it is that needs to be valued in terms of activities, language and social relations, for effective practice. Quality assurance of research practice is an activity that is related to assurance that the elements of action for research are, in fact, effective. Output-oriented, performance-based indicators are a derivative of effective action and not an assurance of effective research practice. Without the type of information that this study has generated, researchers are limited in their ability to develop a platform for challenging the broader systems' level standards and priorities, inherent in policy-driven reward and legitimisation systems. Such conclusions are substantiated by the challenges in the following scenario, faced by Group 2.

### **Government Policy and Negative Impact in the Field of General Engineering Advanced Technologies**

Group 2 had, until recently, operated on a highly successful development strategy based on the formation of strong linkages with other national research organisations and wealthy and powerful international companies. By ensuring access to information and highly sophisticated devices, this group was able to maintain its leading edge research capabilities. Publication was simply a means of ensuring access to presentation forums in which personal contacts and collaborative, mutually beneficial research relationships could be established. Knowledge growth is happening at such an unprecedented rate in this field that the traditional reward and legitimisation structures of academia cannot keep pace. This was also the case with the integration of PhD research activity into the group's research programs - where industry experience and links in the *person* of PhD candidates were also integral to maintaining leading edge research activity. Highly specialised experience and skills could be integrated into the research program because PhD candidates were required to have industry experience to bring to the ongoing programs of the group. The development strategy was entirely knowledge-based and geared to sustaining the group's leading edge status. Although research activities



covered the whole spectrum of research from pure basic to applied, applications research provided the development focus as well as the reference point for strategic direction-setting.

This applied focus may now have to change. The ARC is moving increasingly towards an emphasis on publication and citation profiles as a principal factor in funding of NCGI-classified research.<sup>1</sup> As a result, the activities of this group will have to orient much more closely to publication as a development strategy, or risk not being considered for core research funding applications through the ARC. This move has the potential to undermine the groups leading edge status, because it privileges performance indicators that are at odds with the social relations of a high technology, high rate of growth, knowledge domain. The purposes served by the research will have to be reoriented from applications and industry needs to publications and academic assurance. The implication is that research activity will, in future, be focused on publication rather than strategic advantage within the university/industry networks. It is possible that, as a result of this reorientation to publication profiles as legitimisation criteria, the leading edge of the field may draw away from the group. The time differentials between publication and growth of knowledge in the field mitigate against prioritisation of publication as a development strategy.

A reward and legitimisation structure that focuses on output-based indicators for resource allocation purposes, could well undermine what was previously a coherent and successful strategy integrating research, development, research training and publication. The implications of this scenario for the Government are that publications and citations

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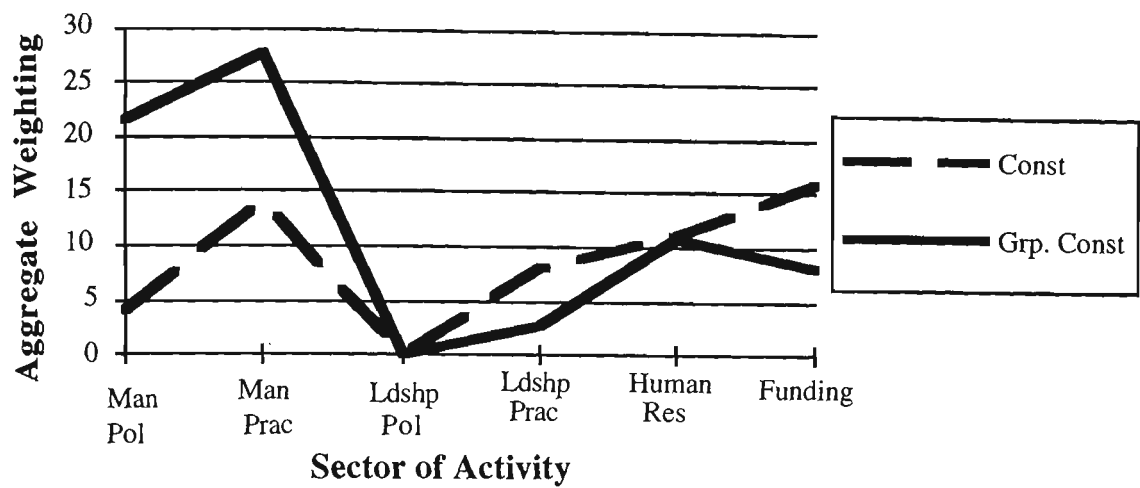
<sup>1</sup> Bourke, P. & Butler, P. (1995) 'The use of Bibliometric Data in Evaluating a Research University: Issues and Measures', in Proceedings of the Fifth Biennial Conference of the International Society for Scientometrics and Infometrics, 7-10 June, River Forest, IL., USA, pp.93-102.

can provide only a limited framework for resource allocation decision-making and can in fact replace, rather than condense, those criteria that signify quality research practice. From the perspective of institutional administrative managers, the implications of this scenario are also highly relevant to decision-making in resource allocation. What they require to inform their decision-making is more transparent appraisal processes so that they can target appropriately, the use of infrastructure funding to support those disciplines where legitimisation criteria are, in practice, at variance with those established by Government.

### **Government Policy and Positive Synergies in the Field of Biological Sciences**

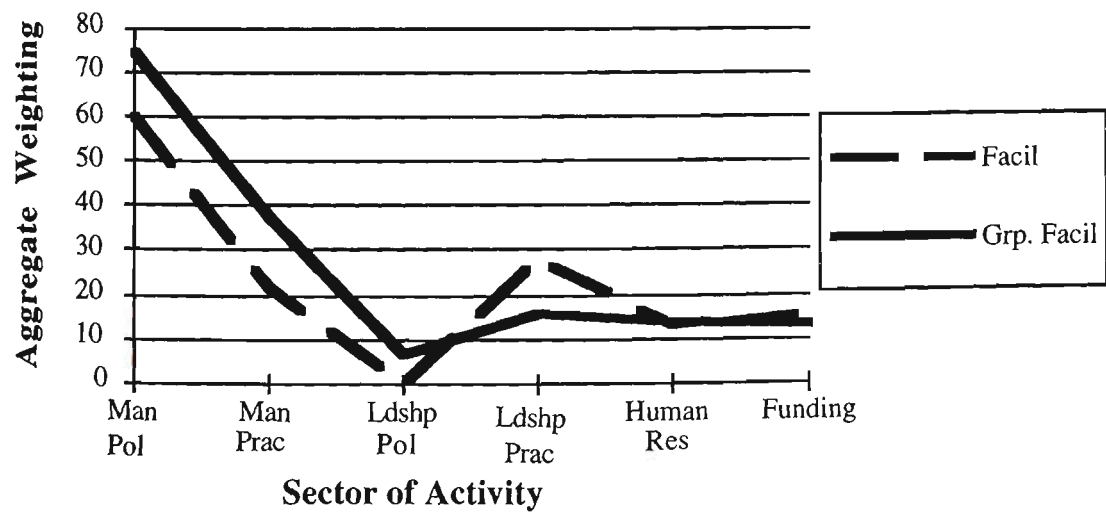
The second group used as an illustrative example for the outcomes of Phase 3 in the present study, is Group 4. The *Project Feedback Summary (D)* presented in this chapter, is that of participant-researcher #2 in Group 4. Once again it may be useful for the reader to return to Chapter 10, in order to familiarise themselves with the characteristics of Group 4's research practice. The key distinguishing feature is that the research activities of Group 4 are located firmly in an historical context of cohesive social relations and collegiality. Being organised, as it is, around knowledge-generating rather than bureaucratic principles, any organisational structures are fashioned to reflect the underlying social relations and values frameworks. The patterns of constraint, facilitation and tension reflected in the sections of the author's project feedback summary for participant-researcher #2 in this chapter, include; the Organisational and Managerial domain, some sectors from the Conceptual and Theoretical Domain, and all sectors from the Social and Communicative domain of action. The levels of constraint, facilitation and tension are illustrated in Figures 11.8, 11.9 and 11.10, respectively.

**Figure 11.7 :** *Organisational and Managerial Domain, Constraining Action for Research Group 4, Participant-researcher #2*



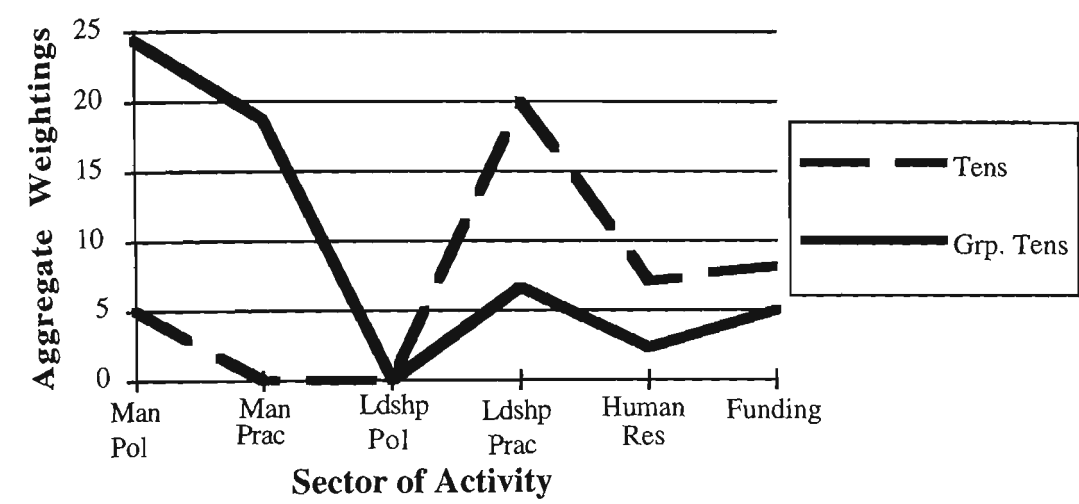
One of the distinguishing features of the aggregate sector weighting profiles for #2, is the divergence between the profile for participant-researcher #2 and the group average sector weightings. Because there were only three participant-researchers involved in the project feedback summaries for Group 4, the weightings of one participant made a significant difference to the average for the group profile, particularly in the Management Policies and Practices sector. The example provided by these profiles, further reinforces the importance of treating the quantitative profiles and the qualitative statements as an integrated whole. The graphs can easily be misinterpreted if taken in isolation. This caveat is even more important in the use of aggregate weightings for constraint, facilitation and tension in the *Group Domain Aggregate Weighting Profiles* (Figure 11.12) discussed later in the chapter.

**Figure 11.8 :** *Organisational and Managerial Domain, Facilitating Action for Research Group 4, Participant-researcher #2*



A general point worth noting for participant #2 in Group 4 is the magnitude of aggregate weighting for facilitation in Sector 1 compared with the aggregate weighting for constraint.

**Figure 11.9 :** *Organisational and Managerial Domain, Tension in Action for Research Group 4, Participant-researcher #2*



The following Project Feedback Summary of participant-researcher #2’s weighted, ordered statements, for the Organisational and Managerial Domain, provides a powerful testament to the value of the Group’s mode of organisation for research. As the Sector definitions have been stated previously in the feedback summary for participant-researcher #1 in Group 2 they will, for the purposes of this report, be omitted from the format in *Feedback Summary D, Group 4, Participant-researcher #2, Individual Profile*.

***Feedback Summary D, Organisational and Managerial Domain,  
Group 4, Participant-Researcher #2, Individual Profile***

**Sector 1 - Research Management Policy Statements**

Your weighting profile indicates that the Research Management Policy sector is seen to be highly facilitating in terms of effective research activity within the School. The diversity of skills and collaborative partners engaged in research mean that there is a complex matrix of research experience available to participants. Because of this variety, the School is able to accommodate a lot of individuals

working on their own interests, within their own academic territories. In all of this activity, the Unit provides a focal point the research.

Advisory Boards for research partnerships include all levels of research personnel so that quality assurance is integral to research decision-making and any problems are surfaced quickly. The flat management structure has been much better to work in than traditional university hierarchies, but recently, extra tiers of management are becoming necessary. The driving force of research activity, however, remains the common interests of people who come together to solve problems. The Project structures mirror these naturally-occurring communication pathways and so people are not pushed into research activities. The Unit is facilitating because it has provided a recognisable identity for the accepted ways of organising for research in the School, which characteristically has no formal structures and no hard and fast rules. Management Policy is to ensure that intellectual property and secrecy agreements are respected but with the understanding that secrecy and confidentiality won't unduly restrict publications. This attitude to such agreements ensures that they do not become problems for researchers.

The stage of development of the discipline within Australia, however, means that availability of expert peer reviewers is very limited. This situation therefore generates a tension in the Management Policy sector because chance is a big factor in the profile development of newer fields such as yours.

## **Sector 2 - Research Management Practice Statements**

Partnerships that provide the most effective mix of skills and knowledge are highly facilitating. Therefore the ability to identify and pull together the right people for building a research reputation is very important. Recognition in your field comes about through synergies, and not competition, within the School. The Unit model of organising for research is based on the Director's philosophy that the way organisms solve problems can be used as a model for problem-solving in general. For example, the concept for a project may have come from the Director but others support or facilitate the research.

At the personal level of organising for research, however, individual habits of prioritising and organising can be less facilitating. In fact, certain aspects of research such as keeping up with the literature tend to 'drop off the edge'. Although the input of students here is supportive, keeping up with the current publications is a highly constraining area in terms of effective research activity.

This situation is further compounded when research involvement is determined by immediacy of need rather than significance. If involvement is determined by immediacy of need then the direct consequence is less than effective research management capabilities. These inadequacies, at the personal level of organising for research, can be amplified when the boundaries of research activity are limited by the researcher's knowledge base or by limited research funding.

### **Sector 3 - Leadership Policy Statements**

No comments recorded during discussions appear to fit this sector definition.

### **Sector 4 - Leadership Practice Statements**

The Leadership Practices sector of activity is weighted as quite highly facilitating with a high level of tension noted in that facilitation. The very strong positive bias to a number of tensions indicates, however, that these are generally creative and productive tensions when related to the use of Project management tools. The time taken for modeling and planning is to a large extent offset by the benefits of effective project management for research projects. Research supervision and involvement with research students is also facilitated by the requirement for students to draw up project timeline charts.

Personal contacts at both the local and national levels are a key element in building up productive research relationships and advancing the field, because it is through such cooperative relationships that synergies and innovation are possible. The teaching/research relationship is enhanced when researchers share with students, their ideas and theories. This is because students can provide feedback regarding other information that might be relevant for intended audiences before public presentations are made by the researcher. This strategy dovetails with the Unit Director's encouragement to researchers to write for the public more often, in an accessible and easily understood manner.

### **Sector 5 - Human Resources Policies and Practices**

The levels of facilitation, constraint and tension are all about equal in the Human Resources sector of activity. New staff can provide teaching expertise previously unavailable as well as new courses in the field and this facilitates established research activity in the School. To a lesser extent, the mapping of Project responsibilities and levels of decision-making within research Projects is also a

useful support for ongoing research. However, the University Personnel Department can undermine or constrain negotiated employment arrangements which benefit academics because it considers aspects of such arrangements unacceptable.

The fact that numbers of students are involved in research projects is sometimes mildly constraining. However, the positive bias to the tension indicates that the advantages outweigh the disadvantages even though student support can be lost with graduation or changes to courses. Similarly, the time involved in supporting new staff members in establishing their academic profile can also be mildly constraining but this is an investment in the future and therefore, a facilitating tension.

## **Sector 6 - Funding**

While the funding situation is considered facilitating in some respects, there are a number of negative aspects which all tend to be mildly constraining. The shift away from laboratory bench priority funding, to an interest in the natural environment, has proven highly facilitating for this field of research. Furthermore, the current funding of more applied research interests is accompanied by technical support and advice in collaborative research activities.

The one drawback to the current applied research priorities, is the lack of funds available for basic biology questions which must be addressed because these are what drive developments in the area. The tension experienced by researchers in relation to licensing agreements, however, tends to be positive and creative, because such agreements include the commitment of research funds that give researchers independence to work in the areas that are necessary for progressing the discipline.

Competition for research funds is very stiff and new researchers face a difficult task in establishing a research profile because there is no established funding policy to nurture them in the competitive environment. Postgraduate involvement in research is also limited by available funds and this compounds the problem for new researchers who are trying to get a foothold. Furthermore, the University administration's cutting of funds for travel to conferences presents difficulties for researchers seeking to advance in their field. Conferences are where researchers learn the most and develop the professional relationships necessary for advancement. This situation has encouraged researchers to develop other sources of funding.

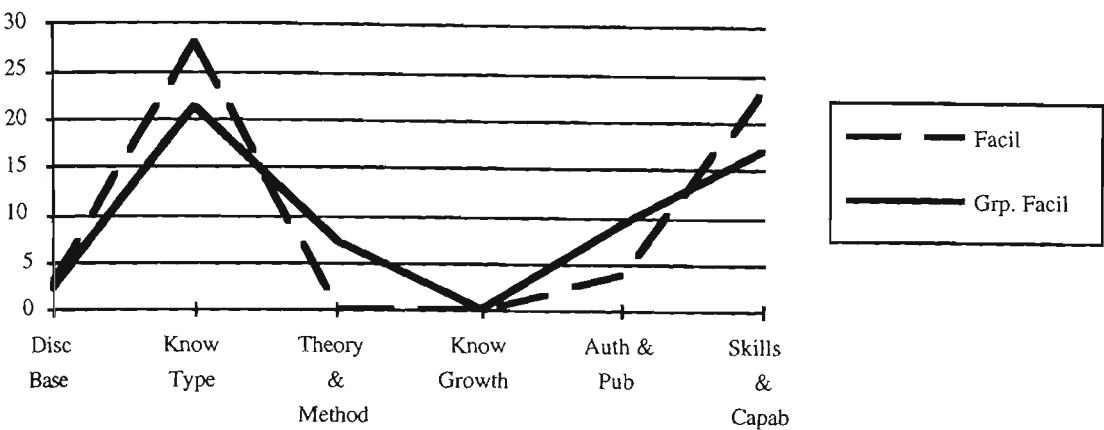
Because of the complex mix of skills, capabilities and specialties in this group's knowledge domain, the group is a naturally-occurring example of the type of collaborative research activity that is being encouraged by government policy. The group's collaborative links with industry and public utilities have provided access to expensive and highly sophisticated research equipment. In the experience of participant-researcher #2 in Group 4, research colleagues have been able to build on the synergies between relations of knowledge and government policy agendas, largely because of the pre-existing conditions which facilitate effective research practice. A number of examples were provided by Group 4 participants, in which they had acted strategically as a group, to 'head off' the policy generated threats to their effective functioning and to capitalise on their established strengths. In fact, the increasing emphasis on publications, a strength of this School, has been used positively to enhance their public profile by developing easily understood genres to ensure raised public awareness about relevant issues. The success of much strategic action is linked to the nature of the knowledge and the synergies between this knowledge base and Government policy initiatives.

The implication of this group's profile of effective action for research is, that at the level of practice, certain types of social relations are better suited to capitalising on the research funding priorities inherent in Government policies. In fact, following the conclusion of the present study, Group 4 was successful in securing Co-operative Research Centre Funding. The obligation for institutional administrative managers in facilitating effective research practice and assuring quality research then, lies in addressing institutional policies that are in conflict with the more flexible and responsive personnel requirements of such groups.

The Sectors included in the thesis, for illustrative purposes, are Sectors 1, 2 and 6 in the Conceptual and Theoretical Domain (*Feedback Summary E, Group 4 Participant-researcher #2, Individual Profile*), and all Sectors in the Social and Communicative Domain. The accompanying graphs are provided in Figures 11.10 and 11.11.



**Figure 11.10 :** *Conceptual and Theoretical Domain, Facilitating Action for Research Group 4, Participant-researcher #2*



*Feedback Summary E, Conceptual and Theoretical Domain in Group 4, Participant-Researcher #2, Individual Profile (Sectors 1,2 & 6)*

**Sector 1 - Discipline Base Statements**

Discipline base statements are defined as those which differentiate the content and boundaries of the particular research activity from other disciplines or fields of research. These are inclusive of the principle knowledge base and supporting disciplines or fields. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

Having an area of expertise that is rare in the discipline can create tension but this can be a creative and productive tension when other researchers qualified in the knowledge base are restricted to laboratory application of their knowledge.

**Sector 2 - Knowledge Type Statements**

Knowledge type statements are defined as those which identify the relationship between the focus of the research activity and the purposes served by advancement of knowledge in the discipline or field concerned. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

The wide variety of research applications which your knowledge base supports provides for a highly facilitating research environment with a wide range of opportunities. The unprecedented growth in some areas has created tension but this is essentially creative and productive, though difficult to manage. The input of

research students in such research activity is highly facilitating because students are dealing with the basic biological questions by developing methods from related basic principles. The potential for immediate application of the research being undertaken means that there are a number of organisations and authorities prepared to fund the research. Such funding fosters the growth of understanding in related areas and facilitates the broadening and growth of research programs over time.

The one problem again with a research focus on immediate applications, is the lack of attention to basic biological issues which can emerge as unintended effects of the application.

## **Sector 6 - Skills, Capabilities and Creativity**

Statements included in this sector are those which refer to skills, capabilities, experience profiles, aptitudes and attitudes in research activity. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This sector has been weighted as highly facilitating and although there are some tensions these are basically creative and productive. The wide range of knowledge and skills available within the School provides for a most facilitative research environment. This situation is mirrored in the collaborative links which are characteristic of research in the area. Independence for researchers in framing their research activities is the key to these linkages working well because independence prevents researchers from stagnating. On the other hand, bureaucracy and paperwork can be maximally constraining because these are the type of activities that can push researchers towards stagnation.

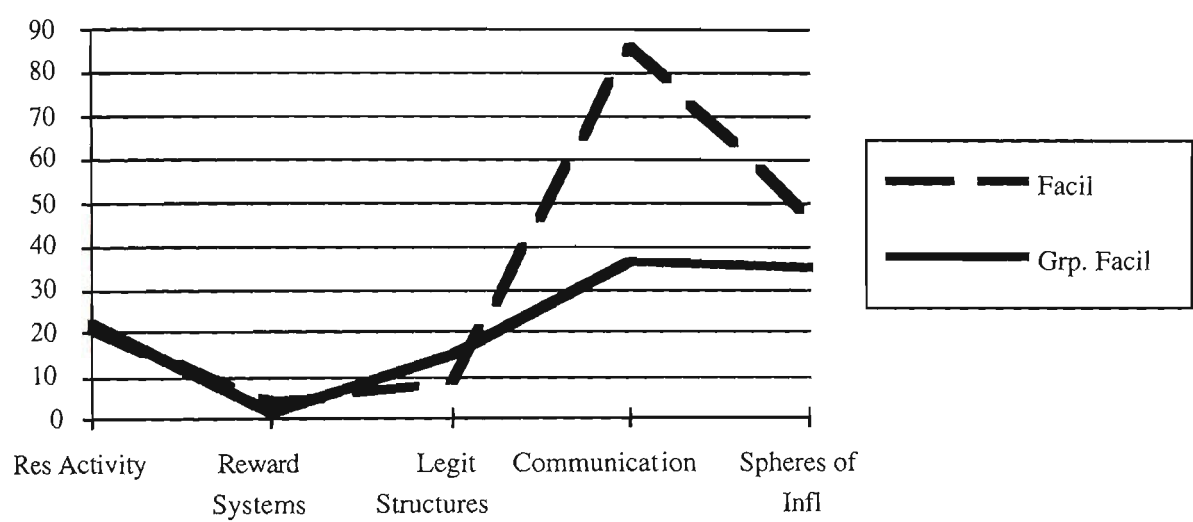
Because research programs are driven by the individual interests of researchers this can cause tension when energies must be redirected to support a colleague in their work. However, the advantages greatly outweigh the disadvantages.

While the problem of isolation can be the result of a particular researcher's unique skills and capabilities within the School, the opportunities afforded by lack of competing or existing tradition in an area of expertise can be highly facilitating.

The importance of the synergies, indicated here, between the social relations of knowledge (action to influence the quality of collaborative research linkages) and

government policies, is further illustrated in the Social and Communicative Domain of Action of participant-researcher #2 in Group 4. The aggregate weighting attributed by participant-researcher #2 in Group 4 is demonstrated in Figures 11.11 and the evaluative summary in *Feedback Summary F, Social and Communicative Domain of Action, Group 4, Participant-Researcher #2, Individual Profile.*

**Figure 11.11 :** *Social and Communicative Domain, Facilitating Action for Research.*  
*Group 4, Participant-Researcher #2*



*Feedback Summary F, Social and Communicative Domain,*  
*Group 4, Participant-Researcher #2, Individual Profile.*

**Sector 1 - Research Activity**

Research activity statements are defined as those which describe the nature of activities which fall into the accepted category of ‘research’, including processes and related purposes. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

The cooperative rather than competitive nature of research activity within the School is facilitating. The synergies created in such an environment are much more facilitating than the competitive and isolating environments of older universities because lots of people are willing to help each other. Furthermore, involvement with research students can be maximally facilitating for researchers but there is some tension involved because of the time required to maintain such relationships.

Qualifications are simply no longer enough to attract funding because of the complex relationship between specific research skills, the nature of current research problems and the immediacy of information requirements of funding bodies. This creates tension because researchers have to dedicate time to 'hustling' for funds. Where unique skills and expertise can provide an advantage in this competitive environment they can also lead to problems because of limited recognition which can limit to some extent the ability to attract funding.

## **Sector 2 - Reward Systems**

Statements included in this sector are those which describe the nature of available rewards and access to recognition. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

The lack of expertise available to the peer review system in your specialist field makes it difficult to get research funded. However, the challenge to communicate your knowledge of this field to the general public provides both a creative tension and a rewarding experience when the communication is successful.

## **Sector 3 - Legitimation Structures**

Legitimation structures are those symbolic structures which determine the source of merit and authority. Statements in this category refer to that which is considered worthwhile and therefore, valued. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

It is an advantage to have completed academic training in an environmentally-oriented field rather than in laboratory research because problems in your specialist area are located in the natural environment and these are currently very much in the forefront of information needs.

The important thing about personal control over project funding through licensing agreements, is the opportunity that this provides for funding both researcher and student travel to conferences. Equally, restricted funding limits the independence that is possible in research activities. The University may take its share of research funds and this is mildly constraining but the researcher concerned should be able to determine what the money is to be used for.

## Sector 4 - Communication

Statements in this sector refer to communication strategies, mechanisms, patterns, expectations and needs. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

This sector is the most highly facilitating for all sectors across all three domains when it comes to effective research activity. Although there is a relatively high level of tension present, the strong positive bias in all cases indicates that the tensions are creative and productive.

The importance of direct personal involvement in dialogue is crucial to effective research activity, be it at conferences, through partnerships between the academic concerned and an individual in collaborative research such as the public utility or through Email contacts with collaborative proposals. The structuring of such communication with :-

- Established communication pathways and protocols to ensure integrity of intended communications in academic/statutory authority interactions which avoids misunderstanding and disputes because of poor or inappropriate communication
- Email access for collaborative work in different capital cities, especially the 'reply' function which saves time and facilitates immediate response
- The support and facilitation provided for new researchers by established academic networks and
- To a lesser extent the use of Gant charts in project work and ARC research proposals is very important to effective and productive research-related interaction.

Interaction with outside organisations is facilitated by contact between individuals rather than through the organisational structures where research is involved. The informal and easy communication between participant's colleagues who are also friends and peers facilitates research because a lot of research activity comes about by chance events or conversations which lead to research projects. People in different organisations can capitalise on different preferences for working hours with Email facilities because the turn-around time does not have to respect normal office hours.

While Email is one of the highly facilitating infrastructures for research activity, interaction through this network must be built on an established personal relationship or the time spent on preliminaries and diplomatic phrasing of comments can work against effective and productive use of the facility as well as the research partnership. Similarly, scientists who are not socially inclined and who work alone can generate conditions which constrain effective research activity.

There are minor constraints that create tension in both project planning activities and attendance at meetings, seminars and conferences are all related to the time involved. The minimal level of constraint and the tension this generates in drawing up management structures is well compensated for by the improved capability to communicate information pathways and management structures to project stakeholders. This is because structural maps provide a tool for understanding how people are interacting when projects become quite large. These constraints and the tension they generate are however a minor consideration when the benefits of such activities are taken into account. The greatest degree of tension is felt in the time it takes and the cost involved in being present at conferences and other laboratories to build personal relationships with individuals who have common research interests.

## **Sector 5 - Spheres of Influence**

Statements placed in this sector are those which indicate levels of influence exerted in a particular relationship or environment. The direction of influence is described in terms of its source and its consequences. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

While this sector of activity is highly facilitating there are a relatively high number of constraints and tensions. Your weightings profile, however, underlines the fact that both formal and informal relationships can be highly supportive of research activity.

### **Informal relationships**

The reality that research partnerships can and do cross University and School boundaries so that individuals can contribute their particular expertise to projects is highly facilitating. Furthermore the researchers personal network of contacts provides for a reciprocal process of information sharing and a resource of expertise.

This can save weeks of work because someone will always know where to go to find answers to questions. To a lesser extent, although still facilitating is the practice of following up shared interests from chance meetings with combined efforts to attract funding to follow those research interests.

### **Formal relationships**

Formal agreements with collaborative partners in statutory authorities facilitate effective research because both independence and mutual protection of each others interests can be guaranteed. However, tension is generated with the need to ensure that respective administrations do not become involved. At the local level of the institution, the devolution of financial control is important to the researcher's perception of university goodwill as too is the highly facilitative infrastructure support provided by the Library and Postgraduate studies. There is quite a degree of tension, however, where the control of consulting funds are concerned. These currently go to the University but could, if the academic chose, go straight to the academic concerned should the University change its policy and assume control of the funds.

To a lesser extent but still important and generating some tension, is the need for disputes in one or other of the organisations involved in research partnerships, to be settled by those directly concerned with the problem in-house rather than both administrative bodies of institutions becoming involved. On a similar level of importance to facilitation of research, however, is the continuing possibility for free and unhindered sharing of information amongst researchers.

There are a number of influences which constrain research activity in this sector and among the most important of these is the imposition of structures on academic activities which break the established rules of interaction with outside organisations. So too, the rules of the university can constrain the actions of academics even if these actions are to the benefit of the University. Furthermore, there appear to be a large number of Personnel rules in relation to employment protocols that are unknown across the university until they happen to be breached. The Personnel Department seems to consider that academics should serve the Personnel functions established within the institution rather than Personnel facilitating the work of academics and this constrains effective research activity.

There is a strong positive bias to the tension generated by a researcher's involvement with a wide range of collaborative research partnerships. There is also a positive tension bias with the maintenance of communication pathways and resolution of administrative problems by respective organisations in these partnerships. This indicates that the stakeholders concerned are currently maintaining successful practices although the situation requires continual monitoring.

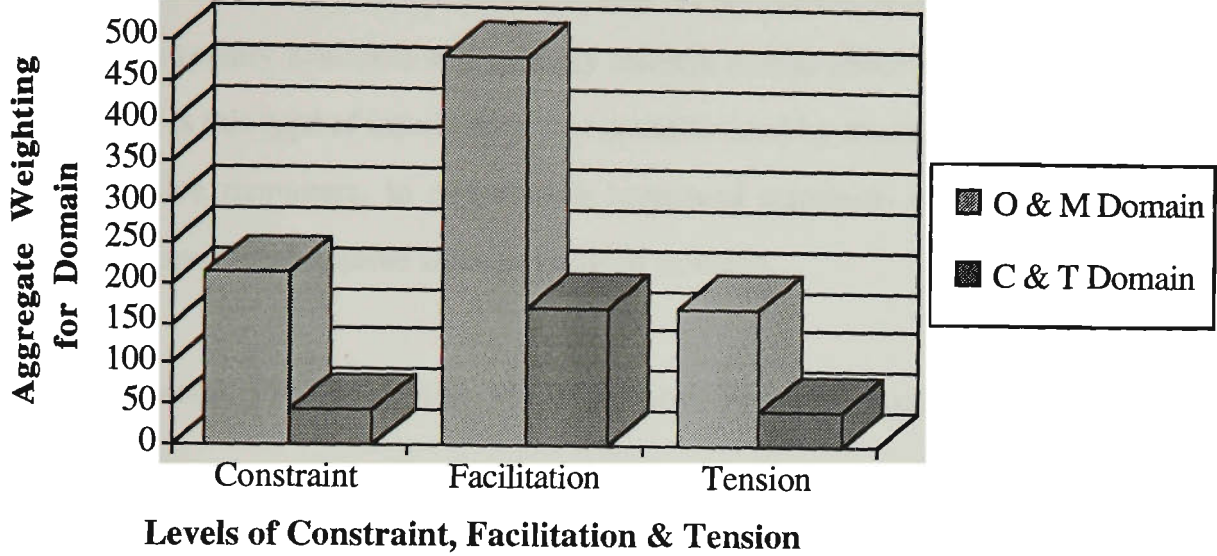
The points raised in this feedback summary are particularly useful, in that they make explicit a number of options for effective action. These options illustrate models of successful communicative strategies for this field of research, in the current research policy environment.

### **Group Profile of Aggregate Weightings for Constraint, Facilitation and Tension in the Organisational and Managerial Domain of Action**

The *Aggregate Weightings Profiles for Domains of Action* represent the third level of aggregation in the appraisal tool. The weighting profiles for *Group Domain Summaries* were developed by aggregating the weightings for constraint, facilitation and tension, for all participant-researchers, for each of the respective domains of action. The domain Project Feedback Summary presented here, is that for Group 4. For the purposes of illustration, both the Organisational and Managerial and the Conceptual and Theoretical Domain weightings have been included in the quantitative profile (Figure 11.12) and related *Domain Feedback Summary G*. The two domain Weighting Profiles and the Summary have been included in the chapter because they demonstrate the striking difference in the relative importance of action in the respective Domains for Group 4 research pursuits. For example, in Group 4, the aggregate weighting for facilitation in the Organisational Domain was just under 500. In the Conceptual and Theoretical Domain, the aggregate weighting for facilitation was just over 170.



**Figure 11.12 : Group Domain Aggregate Weightings Profiles for Constraint, Facilitation and Tension - Group 4**



The *Group Domain Feedback Summaries*, demonstrated here in *Feedback Summary G*, was generated by identifying the themes that emerged in claims, concerns and issues across all participants within the group and relating these to the Domain Aggregate Weightings Profiles.

***Feedback Summary G, Group 4, Domain Aggregate Weightings for Constraint, Facilitation and Tension***

It appears from the weighting profiles, that the Organisational and Managerial domain, with the current criteria for organising the Unit’s research activity, is the most highly facilitating domain of action. When facilitative activity patterns in the research space are considered, however, Conceptual and Theoretical concerns are currently much less of an issue for the researchers than either the Organisational or the Social concerns. It is interesting to note the absence of any comment from the researchers concerned, in the Knowledge Growth sector in the Conceptual and Theoretical Domain. This sector of activity appears to be highly specific to the knowledge base, and for most research groups, is irrelevant.

In the Organisational and Managerial domain, all researchers comment on the highly facilitating nature of the loose, flexible structure of the Unit which is formed by knowledge demands and driven by the research interests of individuals. At the level of Management Practices, however, comments from all researchers indicate the problematic nature of both management capabilities and management strategies that are appropriate to research activity. The weightings attributed to these comments point to a need to make explicit and to enhance the effective patterns of action that can facilitate research where intellectual criteria provide the guiding force.

The domain feedback profiles and summaries are an indication of the efficacy of the tool, at the third level of aggregation. The standards for facilitation of research are transparent and provide readily available and publicly testable claims about the value of action for research. It is this type of information that could be used by researchers and institutional administrative managers, in negotiating improved standards for effective research practice, in specific discipline areas or fields of research.

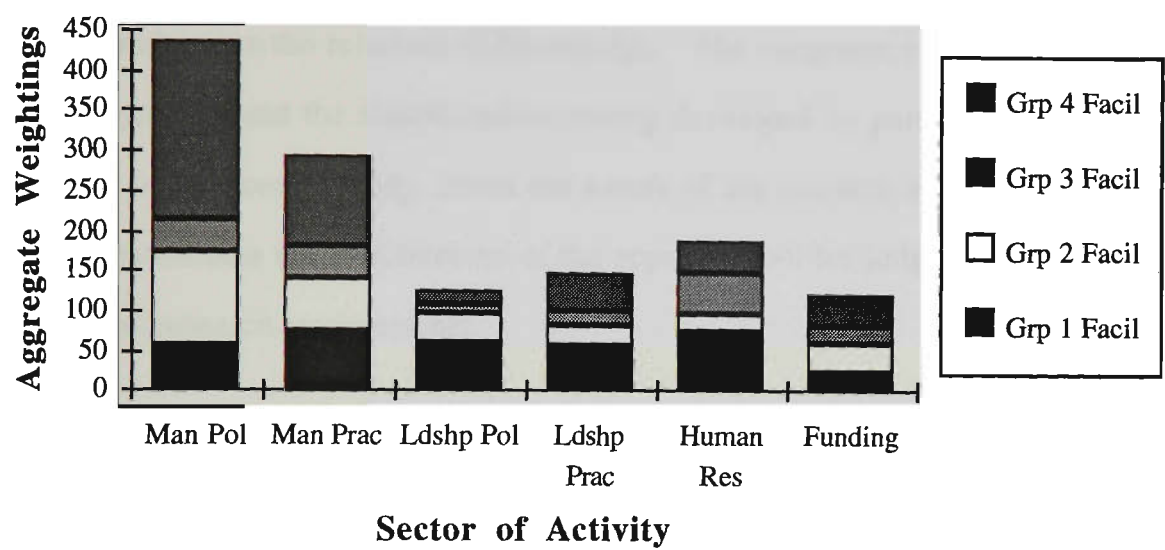
### **Across-Groups Profile of the Meaning and Value of Action For Research**

Within the broader action theoretic framework developed by Habermas, the source of participant's standards for effective action, are the structures that sustain and renew the lifeworld of those concerned. It is these structures that determine the meaning and value of action within a particular sphere of social life, because the lifeworld structures define the purposes that *are* served if action *is* effective.

The action-oriented framework with its domains of action and sectors of activity within respective domains, facilitated the compilation of a cohesive institutional profile of research practice. These profiles represented the common ground across research groups, in the meaning and value of action for research. It is important to note, however, that these *Across-Groups Profiles* include only those statements provided by researchers, and not by administrative personnel who took part in the study. The elements of action for research proved to be qualitatively different according to the purposes served by research and administration respectively. This limitation of the weighting tool, meant that Group 5 had to be eliminated from the analyses of across-groups aggregate weightings profiles, because Phase 3 of the present study saw only one researcher and two administrative staff from Group 5, still involved.

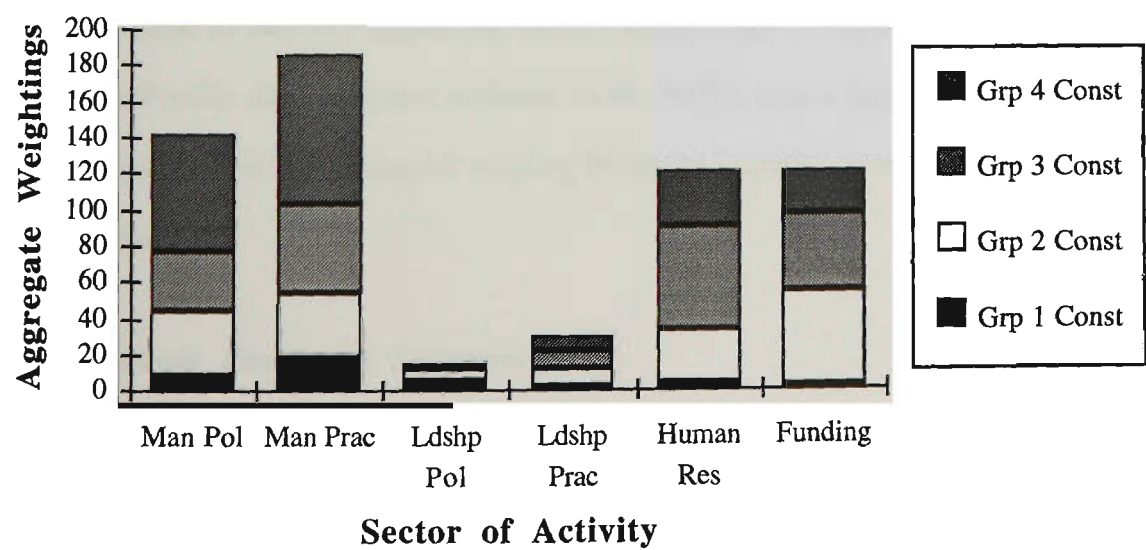
The *Across-Groups Aggregate Weightings Profile* for the respective sectors of activity in the Organisational Domain of action, shown in Figure 11.13, is an indication of the elements of organisational action that emerged as important for facilitation of effective research practice across groups in this institutional setting.

**Figure 11.13 :** *Across-Groups Profile of Levels of Facilitation in the Organisational and Managerial Domain*



The *Across-Groups Profile* also provided an analytical tool for understanding which Sectors of activity in organising for research, were, according to the participant-researchers concerned, important for constraint of effective research practice, as shown in Figure 11.14.

**Figure 11.14 :** *Across-Groups Profile of Levels of Constraint in the Organisational and Managerial Domain*



The levels of facilitation and constraint for Group 3, organised as it was, on an organic model driven by research imperatives, were noticeably different from those of Group 3. Group 3, it will be remembered from Chapter 10, was struggling to retain its organisational cohesion and subject to significant internal and external pressures that tended to undermine the relations of knowledge. The congruence between aggregate weighting profiles and the shared understanding developed by participant-researchers and author in the present study, about the nature of the research space for respective groups, substantiates the effectiveness of the appraisal tool for judging and comparing the quality of research environments.

In order to maintain confidentiality, however, it was not possible to provide information at the level of aggregate sector weightings per group or *Aggregate Domain Weighting Profiles* per group, for *Across-Group Feedback Summaries*. The final feedback summary to individual participant-researchers was limited to the qualitative case report on indicators for effective research practice, presented below. In order to maintain confidentiality, even in a purely qualitative summary, the broader domain categories were used to indicate the common ground that emerged in organisational, conceptual and social action. No quantitative profiles were included in the feedback summaries, apart from one *Across-Groups Weighting Profile*, provided to the RMU representative. This participant-researcher was outside any involvement in research group environments and therefore unable to identify aggregate Sector weightings with particular groups. The quantitative Profile did, however, indicate to the RMU, that a range of research groups within the institution, experienced varying levels of support, across the framework of action for research.

### **Across-Groups Feedback Summary**

Qualitative *Across-Groups Feedback Summaries* were constructed using the following protocol. If the same claim or concern was repeated across statements in a

particular domain of action, by participant-researchers in different groups, this claim or concern was identified by the author, as a common ground to be included in the across-groups feedback summary. Only those statements with a weighting of [4] or [5] were considered in this analysis by the author. The resulting across-groups feedback summary provided an evaluative profile of the indicators in this institution, by which activities or circumstances could be located on a dimension of effective - ineffective action for research. The degree to which indicators in the across-groups feedback summary might be transferable to another institution, would be dependent upon the level of similarity between the institutional contexts and profiles of research contexts. The indicators generated in the study are not presented as a definitive set of standards or quality measures. Rather they are included in this chapter, as an example of the institution-specific standards for the quality of the research environment, that can be generated using the action-oriented framework and methodological tool developed in the present study.

The *Across-Groups Feedback Summaries* are presented in sections. These include, for each Domain:

- Indicators of facilitation
- Indicators of constraint
- Indicators of tension

### ***Feedback Summary H, Across-Groups Profile of Constraint, Facilitation and Tension in the Organisational and Managerial Domain***

#### ***a. Indicators of Facilitation in the Organising of Research Practice***

The following are researcher participant's indicators of effective action for research and are therefore illustrative of the type of action that ensures coordination and social integration in research as a sphere of social life. As such these indicators define the common ground of effective organisational action for research, across

the diversity of research contexts within this university. Effective organisational action included:

- The provision of an environment that supports individual initiative and self-direction;
- The existence of research-related structures that are loose, flexible and knowledge-driven;
- The availability of employment options that offer personal challenge and growth;
- Management practices that ensure the individual's skills, capabilities and interests are the criteria for involvement, task allocation and recognition;
- The use of review processes to redefine structures, roles and responsibilities as research enterprises grow to take on wider and more complex research functions;
- The presence of teamwork in the form of an established pool of relevant skills and capabilities where individuals can contribute to research activities as the need arises;
- The presence of multiple leadership options from the strong and decisive action of an individual to the resources of the group expressed in levels of interest, goodwill and willingness to participate; and
- The presence of established network links as a source of high quality research strength.

#### ***b. Indicators of Constraint in the Organising of Research***

The following are researcher participant's indicators of ineffective action. Such action mitigates against effective coordination of action and therefore, social integration in research as a sphere of social life. As such these indicators define the common ground

of ineffective organisational action for research, across the diversity of research contexts within this university. Ineffective organisational action included:

- Inappropriate and inflexible personnel policies which do not meet the needs of research practice for flexibility and responsiveness in work practices;
- Unacceptable risk to the viability of research pursuits because of the influence of funding structures and mechanisms on selection of research directions;
- Accepted work practices that were ineffective because of the increasing complexity and range of purposes to be served in changing research environments;
- Accepted management strategies that were inappropriate for research practice;
- Continuing heavy teaching commitments and lack of administrative staff support, causing a 'blowout' in workloads; and
- Absence of skills development programs across a range of functions now required in research practice.

### *c. Indicators of Tension in the Organising of Research*

Indicators of tension in the Organisational and Managerial Domain demonstrate the nature of unresolved conflict between established ways of coordinating action and those needed at the level of practice, for effective social integration. While tensions can be constraining and undermining or creative and productive, those which emerged as common ground in the Organisational Domain, were all constraining and undermining indicating a general need for more sophisticated organisational strategies.

There was tension:

- Between a need for academic autonomy and the need for more formalised management structures as research enterprises grow and increase in their complexity of operation;

- Between a desirable growth in the demand for innovative problem-solving research to meet client needs and the associated growth of projects beyond available management resources and capabilities; and
- Between the limited duration of postgraduate studies and the valued involvement of postgraduate students in research programs.

*Feedback Summary H, Across-Groups Profile of Constraint, Facilitation and Tension in the Conceptual and Theoretical Domain*

*a. Indicators of Facilitation in the Framing of Understanding for Research Practice*

The following are participant-researcher's indicators of enabling action for framing understanding in research practice. It is this action which is necessary to ensure effective cultural reproduction and therefore continuity and coherence of knowledge in the field of research. These indicators demonstrated the common ground in effective framing of action for research and included:

- Involvement in collaborative research with the potential for generating creative solutions to research problems;
- The presence of multiple theoretical and methodological frameworks that provide for critical awareness;
- Availability of opportunities to establish new theoretical and methodological frameworks in emerging fields of study;
- The presence of expectations that individual strengths are the focus for publication activities; and
- Recognition within the field of the value of having both a broad knowledge base and an individual area of specialisation.



***b. Indicators of Constraints in the Framing of Understanding for Research***

The following is an example of researcher participant's indicators of action that mitigate against effective cultural reproduction, and therefore continuity and coherence of knowledge within the field. As such this indicator defines the common ground, across the diversity of research contexts within this university, where the interpretive schemes of the researchers concerned, are insufficient for research practice.

- Where research activity in the field or discipline is excessively demanding personally and/or professionally.

***c. Indicators of Tension in the Framing of Understanding for Research***

Indicators of tension in the Conceptual and Theoretical Domain of action demonstrate the nature of unresolved conflict between established ways of framing understanding and those needed at the level of practice, for continuity and coherence of knowledge in the field of research. Tensions can be constraining and undermining or creative and productive.

Constraining and undermining tensions included:

- Competing demands for efficient management practices and unorthodox management strategies founded on sensitivity to the needs of researchers to support research-related independence, creativity, skills and interests; and
- Facilitating interdisciplinary and multidisciplinary research accompanied by a requirement for researchers to occupy intellectually problematic ground with more powerful and well-established disciplines.

Creative and productive tensions included:

- The tension between rapid knowledge growth in a field and development of necessary creative researching capabilities;
- The presence of wide variation in background experience and researching capabilities which can be the greatest strength (or the greatest weakness in the case of constraints) of a group;
- Meeting the responsibility of communicating information to those with a need to know in a timely and understandable form; and
- Meeting the competing agendas of varied demands while at the same time taking the opportunity to progress skills development to meet these demands.

*Feedback Summary H, Across-Groups Profile of Constraint, Facilitation and Tension in the Social Domain of Action*

*a. Indicators of Facilitative Shaping of What is Valued in Research Practice*

The social shaping of the research space ensures that individual competencies are sufficient to maintain a common understanding of the action situation, securing the necessary enhancement and renewal of the individual's researching capability. Indicators of supportive action in social shaping, identified by participant-researchers were:

- Continuing participation and influence in international networks that provide for sharing of, and access to, resources;
- Continuing personal interaction and communication with others in the field of research;
- Achieving and maintaining high public profile and a positive public image in research pursuits;

- When the research activities valued by researchers were also the basis of reward and recognition;
- When personal experience and accomplishment was the basis of recognition and academic authority;
- Employment of communication strategies that ensure productivity and stability in established research collaborations as well as the initiation of new partnerships; and
- When financial and intellectual independence are assured in the legitimation structures.

***b. Indicators of Constraining Influences on The Social Shaping of What is Valued in Research***

The social shaping of the research space can mitigate against the development of individual competencies required to maintain a common understanding of the action situation, and therefore, enhancement and renewal of the individual's researching capability. An indicator representing constraining action the in social shaping of research practice, identified by participant-researchers, was:

- When specific skills and competencies required for research tasks were not compatible with personnel policies.

***c. Indicators of Tension in the Shaping of What is Valued in Research***

The social shaping of research practice can involve competing or conflicting competency requirements that impact on the development of interactive capacities required for social action. The impact can be of the constraining and undermining kind leading to alienation or creative and productive leading to enhanced identity and social competence within the field of research. In the case of the present study, the common themes that emerged across groups involved *only* constraining and undermining tensions.

- Conflict between the requirements of current work practices and the need to participate in non-competitive, inspirational, collaborative, problem-based research activity;
- The choice of research directions or focus and the increasing necessity to develop advocacy skills and/or applications intelligence; and
- The problematic relationship between research enterprises and their funding bodies.

While the indicators illustrated here provide a picture of the quality of the research environment at the level of the institution, a more comprehensive comparative analysis using a sector profile breakdown would be possible as a continuous quality improvement strategy. As presented here, however, these indicators of constraint, facilitation and tension across the three domains of action, do provide an example of standards for quality research, grounded in the everyday action of research practice, that could be used to address the inadequacies of current reward and legitimation systems. Because current systems are oriented entirely towards performance-based measures, the information that they generate concerning quality research practice falls well short of that provided in the individual and group project feedback summaries. In these summaries, objectification of subjective validity claims about the value of action for research, at successive levels of aggregation, provides directly observable and publicly testable data about the elements of action that constitute quality research practice. These standards provide, on the one hand, an itemised profile of organisational, conceptual and social action that sustains research as a sphere of social life and on the other, a profile of action that constrains or undermines effective research practice. With such information, institutional administrative managers and research practitioners are better placed to prioritise and to target funding of research in ways that both assure quality research practice and ensure sustainability and renewal of researching capabilities.

**Further Refinements in the Use of the Quality Appraisal Tool**

A more comprehensive and critical analysis of the aggregate weighting profiles, using direct comparison between groups, while not included in the feedback summaries to participant-researchers, is included in this chapter, as a further development of the appraisal tool. Figure 11.15 is a composite profile of facilitation, constraint and tension in the Organisational Domain of action, for participating groups, at this institution.

**Figure 11.15 :** *Across-Groups Domain Aggregate Weightings Profile for Levels of Constraint, Facilitation and Tension in the Organisational and Managerial Domain*

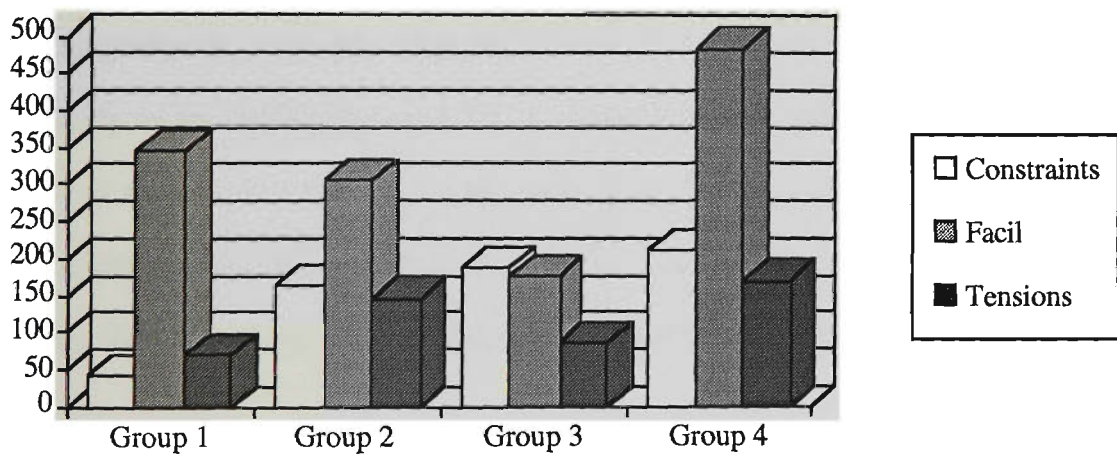


Figure 11.15 demonstrates, in particular, the differences between levels of facilitation and constraint for Groups 3 and 4. While the level of tension (a sub-set of facilitation and constraint) is higher for Group 4 than it is for Group 3, the tensions experienced by researchers in Group 4 were invariably creative and productive. Those experienced in Group 3 were constraining and undermining. The nature of tensions is substantiated by the fact that the level of constraint for Group 3 is higher than the level of facilitation in organisational action for research. While Group 3 was tending towards social disintegration, Group 4 was enjoying a phase of dynamic growth.

The *Across-Groups Domain Aggregate Weightings Profile* also provided information that could prove useful for internal benchmarking within the institution. Group 1 is currently experiencing a phase of relative stasis, achieving high levels of productivity as well as broadly-based support for its research programs. Tensions, including creative and productive are low for Group 1 and this may prove to be a problem if other researchers in the field achieve significant methodological advances in the use of computerised, information management systems. The expertise of Group 4 in this area of information management, dealing with large volumes of focus-specific data could, in the future, prove useful to Group 1 if it was to adopt more aggressive technological stance to data storage and retrieval methods. Group 2 is currently experiencing considerable pressure due to the changing legitimisation and reward structures that are in conflict with its successful, field-specific, integrated development strategy. Group 4 also has a well-integrated development strategy, but one that is successful because it builds more effectively on the synergies between Government funding priorities and discipline imperatives. It may be that Group 2 could gain some useful insights from Group 4's development strategies that have been effective in terms of securing funding without compromising their knowledge-driven philosophy in research practice.

### **Implications of Action-oriented Standards for Quality Appraisal of Higher Education Research**

By identifying and confirming effective action for research, using the weighting of action for effective research practice at successive levels of aggregation, the results in this chapter have demonstrated that :

- The activities and circumstances that create effective learning environments for researchers can provide an alternative framework for valuing research activities;
- Researchers can make explicit and communicate the nature of facilitative action in relation to research using an action theory framework;

- This evaluative framework provides an alternative quality appraisal system that can complement traditional academic performance criteria;
- The action-oriented framework and methodological tool, provides a mechanism for comparative analysis of research environments, internal benchmarking and continuous quality improvement practices.

The *Project Feedback Summaries* demonstrated that an information resource generated through reflective and critical reflective practice, can provide the data that would be required for researchers to explain and to justify:

- a. What they are doing and why the activities they and the broader systems engage in are effective or ineffective action for research;
- b. Why certain activities or circumstances, at the local level of research practice and at the broader level of the system, do or do not facilitate effective research practice; and
- c. What type of action, in terms of the Sector involved, might be necessary for more effective research practice at both the level of research activity and at the level of the system.

In effect, the information in the feedback summaries provided action-oriented profiles of the elements of research practice that were essential to quality research. These profiles also described the activities and circumstances that were located more towards the ineffective end of the spectrum of action. None of this metalearning about action for research could have been made explicit using standard output-oriented, performance-based indicators.

While not reducible to standard performance indicators, the type of information revealed in this study, about metalearning for effective research practice, is essential to the sustainability and renewal of research pursuits. Metalearning, derived from everyday research practice, provides the essential standards by which researchers discriminate

between effective and ineffective action for research. When legitimation and reward are determined solely by output-based performance indicators, the action, circumstances and conditions necessary for effective research practice can only be implied. Output-oriented, performance-based indicators cannot serve to make explicit the preconditions necessary for effective research practice. Because they are purely summative measures,<sup>2</sup> performance indicators are inherently insufficient for quality appraisal purposes at the level of research practice. The quality appraisal framework developed in the present study provides both the opportunity and the means for balancing the current bias towards performance-based indicators in quality appraisal of higher education research. The efficacy of this tool for quality appraisal purposes is examined in the following chapter.

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<sup>2</sup> Guba, E.G. & Lincoln, Y.S. (1989) *op. cit.*, pp.189-190.



## CHAPTER 12

### PHASE 4 - THE EFFICACY OF THE TOOL FOR QUALITY APPRAISAL OF RESEARCH PRACTICE

This chapter describes the learning in action that enabled researcher and participants to refine their understandings about the nature and the efficacy of the quality appraisal tool. What is described and justified is their shared understanding about the effectiveness of critical reflective practice, in the form it was utilised in this study, for quality appraisal of research. Enhanced understanding about the tool in operation was achieved by objectifying metalearning about the tool at the level of theory-in-use. With enhanced understanding of effective action for appraisal of research, both researcher and participants were able to play a social role in shaping ways of construing<sup>1</sup> effective or ineffective appraisal practices. In other words, this chapter demonstrates how more sophisticated cognitive structures<sup>2</sup> for quality appraisal of research could be generated through formative evaluation<sup>3</sup> of the tool itself. This chapter documents the process involved in refining the appraisal tool and therefore the progress that was made in the present study in communicative rationality.<sup>4</sup> Progress in communicative rationality on the part of researchers and participants was evidenced in:

- The evolution of language used in process steps to describe effective action for research as the basis for framing quality appraisal of research practice;
- Increasing sophistication of activities in the development of the appraisal tool for identifying and analysing effective action for research; and
- The modes of social interaction that emerged as necessary to ensure effective use of the appraisal tool.

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<sup>1</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p.65.

<sup>2</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds) op. cit., p.228.

<sup>3</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>4</sup> Habermas, J. (1984) op. cit., pp.106 & 119.

It was this evidence that served to confirm the value of the tool for:

- Generating valid information about the value of action for research;
- Facilitating free and informed choice about the value of action for research; and
- Sustaining the integrity of the individual's internal commitment to action in quality appraisal standards.

These are the governing variables of Agyris and Schöns' Model II theories-in-use.<sup>5</sup> Model II theories-in-use are those that assure sustainability, development and renewal of human action systems. With its November 1995 recommendations on *The Promotion of Quality and Innovation in Higher Education*,<sup>6</sup> the HEC signalled a move towards the institutionalising of quality assurance practices in the governance of Australian higher education institutions. This move highlights the need raised in this thesis for institutional administrative managers and research practitioners in higher education, to accept 'responsibility for deciding how quality will be measured and how resulting data will be continually used for quality improvement.'<sup>7</sup>

### **Methodological Insights and Implications for use of Appraisal Tool**

The study demonstrated that it was possible to develop a common, action-oriented language for negotiating shared situation definitions for effective or ineffective research practice, even in a context of diverse research activities. The action-oriented framework provided a language for negotiating situation definitions from the perspective of different

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<sup>5</sup> Agyris, C., Putnam, R. & McLean Smith, D. (1985) op. cit., p.98-102.

<sup>6</sup> Higher Education Council of the National Board of Employment, Education and Training (1995) *The Promotion of Quality and Innovation in Higher Education: Advice of the Higher education Council on the Use of Discretionary Funds*, AGPS, Canberra, p.25.

<sup>7</sup> Dill, D.D. (1992) op. cit., p.72.

roles and purposes, even though the level of focus and the content of participants'/researchers' statements were role and context specific. One of the key insights of the present study was that the descriptive statements made by participants/researchers about the *meaning* of effective action for research, were inextricably tied to their particular role and related subjective validity claims. However, the generic categories of action developed in the study as Sectors of activity for research, did enable researchers to describe, explain and justify the value of action for research within a coherent action-oriented framework.

In the study, participants/researchers were asked to weight each statement according to the level of impact on *their* research practice because subjective validity claims necessarily differed according to the choices the individual made in construing a particular action and its purposes.<sup>8</sup> This link was highlighted by participant-researchers who had to play a role in both management and research practice. These participant-researchers indicated that, because of the different purposes being served, they would weight a particular statement differently according to which 'hat' they were wearing. For example, participant #6 in Group 3, in the Organisational and Managerial domain weighted the following comment, from their researcher role as Constraining [4].

Since the Unit has grown, the leader and senior researcher are now getting better at their supervisory role which has changed to be more management oriented.

When responding as a research manager, the same statement was weighted Facilitating [3].

The interesting point to note is that participant-researchers did choose to distinguish between research practice and management practice, and that sometimes, these roles were

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<sup>8</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p.12.

in conflict. The level of conflict was very much determined by the principles guiding the organising for research. In Group 3, such organising principles were unclear. While an administrative solution to Group 3's problems was being sought, the person taking an administrative role experienced continuing conflict of purposes due to the uncertainty and ambiguity regarding the group's organising principles for action. The same person indicated a number of circumstances in which the weighting attributed in their 'researcher' role was different from that which would have been attributed in their 'administrator/manager' role. On the other hand, Group 4 was clearly organised around principles based on the intellectual imperative. In Group 4, only a minor difference between the two weighting profiles for manager and researcher was noted.

The difficulties encountered by participant-researchers using the weighting grid, when they had dual roles to play, did highlight the need for a supportive dialogue as a necessary context for weighting activities. The demanding nature of the task of articulating tacit knowledge<sup>9</sup> became apparent as participants struggled to explain why they wanted to attribute a particular weighting to activities or circumstances. Dialogue between author and the participant or participant-researcher concerned, was an important part of the process of finding words to describe what had previously only been known in a tacit sense. Even though it was a demanding task, the level of engagement and commitment to the weighting process was inherently very high because the activity focused on the moral practical concerns of the participant's own research practice.

Most statements made by participants or participant-researchers could be assigned unproblematically to one or other side of the grid, indicating the relevance and usefulness of the construct CONSTRAINING < - - - > FACILITATING to the individual's considerations about the value of action for research. The exceptions in which activities

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<sup>9</sup> Bernstein, R.J. (1983) *op. cit.*, p. pxi - xiii.

or situations could not be assigned easily using these contrastive poles,<sup>10</sup> proved to be the most important insight of the study for enhancing the usefulness of the process as a tool for quality appraisal. The implications of this insight will be discussed in the section in this chapter entitled, Efficacy of Tensions as a Central Design Feature.

### **The Efficacy of the Tool for Eliciting Tacit Knowledge about the Nature of Effective Action for Research**

The efficacy of the quality appraisal tool for eliciting tacit knowledge about the value of action for research was confirmed by the significant insights that participants gained in the critical reflective action<sup>11</sup> of the weighting process. The weighting process inevitably involved much reflective discussion, in which researcher and participants/researchers used the descriptive statements as a resource for developing shared understandings about the claims, concerns and issues that had been raised. It was this aspect of the reflective appraisal process that most clearly demonstrated Kelly's Sociality Corollary.<sup>12</sup> This corollary states that 'To the extent that one person construes the construction processes of another, he or she may play a role in the social processes of that person'.<sup>13</sup> It is this type of interaction that is the foundation of communicative action<sup>14</sup> and therefore the mechanism by which double-loop learning<sup>15</sup> may take place. Participants were able to critically analyse their own action and the action of others, by contrasting their theories of action about the meaning and value of action for research with their theories-in-use, revealed using cognitive mapping and the weighting grid as tools for critical reflective appraisal. Notable insights that emerged in the course of the present study were:

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<sup>10</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., pp. 9-11.

<sup>11</sup> Habermas, J. G. (1971a) op. cit., pp.196-99.

<sup>12</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p. 14.

<sup>13</sup> Ibid.

<sup>14</sup> Habermas, J. (1982) op. cit., p.264.

<sup>15</sup> Argyris, C. (1992) op. cit., pp. 8-9.

*Group 1, participant researcher #4 :*

That the depth and breadth of multidisciplinary approaches now being incorporated in this research program were accelerating the growth of knowledge and sustaining this group's leading edge status.

*Group 2, participant researcher #2 :*

That the integrated development strategies employed by the group were the key to their innovative capabilities which ensured leading-edge status in the field.

*Group 3, participant researcher #1 :*

That because this field of research was in an emerging paradigm, researchers could secure a platform alongside established discourses by slanting their articles to mainstream, high profile journals.

*Group 4, participant researcher #4:*

That organically-derived management strategies based on the social relations of knowledge production were most appropriate to the creative and innovative activities of research practice. Problem-centred, interest-based principles were the key to the group's researching capabilities and therefore the foundation of its success in securing research funding.

*Group 5, participant #2 :*

That the core strength of the Centre's marketing profile was the academic status of its researchers in the knowledge domain of the discipline. If the Centre was to maintain its high profile as a research enterprise and attractiveness in the market domain, academic pursuits needed to be protected in the context of excessive demands for Centre services.

Insights such as these provide an indication of the metalearning in research practice that ensures:

- Effective action for continuity and coherence of knowledge in the field of research (Group 1 & Group 3).
- The provision of circumstances supportive of coordination of action for effective research (Group 2 & Group 4).
- The conditions necessary for sustainability of interactive capacities for effective research practice (Group 5).

Articulation of tacit standards for judging the quality of research practice, placed participants/researchers in a better position to explain and to justify the type of action that could facilitate effective research practice. In other words, they were able to identify the standards by which they judged effective action for research, as summative merit statements.<sup>16</sup> It was this type of information that could be used by researchers to either complement or to challenge, research quality judgements made using purely summative worth criteria<sup>17</sup> such as output-oriented, performance-based indicators.

### **Insights and Caveats in the use of the Reflective Appraisal Tool**

The one modification to terminology suggested by participants for the tool was that in the Conceptual and Theoretical Domain of action, the word *facilitating* should be changed to *enabling*. As this insight emerged halfway through weighting process, the label in the weighting grid was left unchanged, but the alternative label was indicated verbally with each subsequent weighting. As the weighting process was refined through interaction, clarification and feedback, amendments to instructions were incorporated into the design of the tool. In particular, these amendments were made to the definitions for Policy type

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<sup>16</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>17</sup> Ibid.

statements. Policy statements, it was revealed, were a theory of action and as such, unproblematic to those who made them because they were an assertion about 'the nature of things'. A discussion sequence in which adjustments were made to instructions, is demonstrated in the following dialogue sequence. The statement involved was categorised in the Management Policy Sector of the Organisational and Managerial Domain. Statements were assigned to this Sector if they were representative of beliefs, values and understandings about the organisation and management activities appropriate for research activity. The statement was that:

A management role requires that you rise above personal biases and interests in order to maintain team spirit.

When asked to weight this statement in terms of constraint or facilitation of research, the participant responded with the comment:

Well this simply is the case - you can't say that it is constraining or it is facilitating - it just IS. I don't think you can weight it - what do you mean?

The author suggested that:

[I]f you were to resign your position in this group, in handing over to your successor, how important would it be to make this fact known to that person ?

The participant replied:

In that case, I have to first answer , Yes! this IS important and then I can weight it.

The same situation occurred in another Domain most often, with statements in the Discipline Base Sector of the Conceptual and Theoretical Domain. Statements in this category of action were defined as those that distinguished the content and boundaries of



a particular research activity. A statement such as the following resulted in similar discussions and solutions:

The knowledge base incorporates a wide range of specialist knowledge domains.

With this insight, the weighting protocol was amended with the addition of an explanatory statement to the Sector definition that stated;

These statements can be expressed as “if - then” statements. If X is the case then this will/will not facilitate research practice. The level of impact on facilitation/constraint is indicated by the weighting which you attribute to the statement.

As mentioned in previous chapters, another major insight which occurred in the first attempts at the weighting process, was the need to emphasise that participants were weighting each statement in terms of facilitation or constraint of *their own* research practice. The caveat that descriptive statements or subjective validity claims are inextricably tied to the individual’s experience, has important implications for both the weighting activity itself and the interpretation of results. If the participant treated the statement as a normative validity claim, to be judged in terms of its rightness,<sup>18</sup> then the weighting simply reflected the relationship of the activity or situation to the norms of the relevant social group, thus reinforcing single-loop learning. It was necessary to emphasise to participants that the weighting for a statement could only be judged in terms of the impact on their own research practice. To emphasise this point, the researcher would emphasise that:

You can only speak for yourself in this weighting process.

The process would have been flawed, if, in seeking to illuminate theories-in-use, the activities had inadvertently elicited weightings for theories of action, representative of the general social group. The reflective appraisal process employed in the present study was

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<sup>18</sup> Habermas, J. (1990) op. cit., p. 58.

founded not on normative validity claims to rightness, but on *subjective validity claims to the truthfulness of statements about the value of action for one's own research practice*.

### **Use of the Appraisal Tool in Developing a Language for Critical Reflective Practice**

By using the appraisal tool developed in the study, participants were able to prioritise activities according to the level of impact that each activity had on constraint or facilitation of research practice in their field of research. They did this by attributing weightings to their statements, with the use of the weighting grid. The patterns of significance that emerged for participants in this process demonstrated the power of the appraisal tool for articulating tacit knowledge about action that was important for effective research practice. The appraisal tool enabled participants to make explicit the nature of intuitively understood constraint or facilitation in a particular Sector of activity.

The following examples of constraining action for research have been chosen because they illustrate the patterns that connect different Domains of action in relation to a particular issue. The issue is that of increasingly managerialist orientations toward the organising of research at the institutional level. The examples demonstrate that the domain of action most affected by increasing managerialism can vary across differing knowledge bases and organisational arrangements for research. The patterns that connect the diversity and complexity of activities across research contexts can, however, be identified and communicated using the action theoretic framework developed in the present study. The weighting process proved to be pivotal in this development of in-depth understanding about the nature of concerns and issues in varied contexts of research practice. For example, the central issue that emerged for participant researcher #1 in Group 4, with regard to Management Practices, was the bureaucratisation of research management activities, which was seen to be severely limiting quality time for generating knowledge. The centrality of this issue became evident when the statements

were ordered according to the weightings attributed by participant researcher #1. This ordering is demonstrated in Table 12.1, that includes statements from the Management Practices sector.

Management Practices or Sector 2 statements it will be remembered, were those which described what happened in practice with the organisation and management of activities related to research. The level of impact in terms of constraint was indicated by the weighting which the participant attributed to the statement.

**Table 12.1 : Organisational & Managerial Domain, Management Practices Sector**  
*Participant Researcher #1, Group 4*

STATEMENT	Cons/Fac	Sector	Wt
Those paid to manage academics often find it difficult to comprehend the problems of teaching and research.	c	2	3
Funding organisations do influence directions and boundaries of research because they require a particular product which narrows down the research process to the product or field required.	c	2	3
Management and Promotion appointee to Unit had difficulty comprehending the position of academics on certain matters.	c	2	4
Traditional public service criteria for performance within the calendar year are inappropriate for research and research potential.	c	2	4
Managers in general simply apply a set of regulations that have been handed down from above.	c	2	5
If regulations implemented in the name of management are not developed in the context of generating and transmitting knowledge then chances are they will be entirely inappropriate.	c	2	5
Quality time for generating knowledge is now severely limited.	c	2	5

The impact of increasing managerialism on everyday research practice, is indicated by the maximum weighting for constraint that this participant attributed to managerialist type action, in the organising of research.

An important outcome of the weighting process, demonstrated in Table 12.1, was the objectifying of subjective validity claims about the value of action for research, in a broader context of action systems. Participants were able to stand back from the immediate personal conflicts and irritations they experienced in everyday activity. They were able to critically analyse their subjective validity claims in a context of broader action systems, because the weighting grid enabled them to identify the action with a particular Sector of activity. This broader view facilitated growth in understanding of the ways in which the meaning of action was being shaped or distorted by system-level imperatives.

**The Value of the Tool for Eliciting Critical Reflective Analyses**

The reflective practices author and participants/researchers engaged in, also revealed a further advantage of the weighting system for facilitating critical reflection. When local issues were viewed in the context of broader systems of organisational and inter-organisational action, immediate problems were more likely to be approached analytically than adversarily. The issue raised by participant researcher #1 in Group 4, concerning the appropriateness of research management practices for research activities, was noted by another member of the group in a different Sector of organising for research. For this member of Group 4, participant researcher #2, the concern about increasing managerialism was evidenced in the form of inappropriate use of Human Resources. The increasingly managerialist attitude of institutional administrative services seen by #1 as a major concern in terms of Research Management Practices, was experienced by his colleague, participant researcher #2, in quite a different context. The weighting process revealed, that for participant researcher #2, the impact of inappropriate administrative practices was evident in the problem of uninformed administrative personnel dealing with collaborative research partner organisations, outside the university. Increasing managerialism for #2 was experienced not as one of Management Practices action, but rather one of inappropriate use of Human Resources, in the social relations of research. The statements and weightings that illuminated the nature of the issue, are displayed in Table 12.2 taken from participant #2's *Project Feedback Summary* in the Human

Resources Sector, of the Organisational and Managerial domain. Human Resources Policy and Practice statements it will be remembered, were defined as; requirements and expectations in relation to human resources including roles and responsibilities, career pathways of options available, personnel selection criteria and protocols for selection. The level of impact in terms of constraint was indicated in Table 12.2, by the weighting which the participant attributed to the statement.

**Table 12.2 : Organisational & Managerial Domain, Human Resources & Policies**  
*Sector Participant Researcher #2, Group 4*

STATEMENT	Const/Fac	Sector	Wt
Personnel operates as if academics were their servants rather than being there to facilitate the activities of academics.	c	5	2
There are problems with the University administration and their rules for operating because Personnel bring up rules that no-one has even heard of in terms of employment protocols.	c	5	3
While an academic can act in the best interests of the University, actions are not always according to the rules.	c	5	3
The concern with structures being forced on academic activities is that the number of rules that are inadvertently broken in dealing with people outside the university, is significant.	c	5	4

**Vaue of the Tool for Eliciting Tacit Knowledge about the Locus of Problematic Action**

The weighting process also proved to be most effective as a tool for naming and framing participant’s claims, concerns and issues. However, there was an additional outcome facilitated by the weighting process. The outcome was, that tacit understandings, or previously held feelings of either satisfaction or disquiet about the research space, could be identified and explained. When they used the statements that had been ordered, according to the weighting profile, participant/researchers demonstrated that they could better understand why personnel policies might be particularly problematic for their field of research. The statements in Table 12.3, for participant researcher #1 in Group 3,

reiterates the issue of increasing managerialism in questioning the appropriateness of research management practices. In Group 3’s field of research, however, increasing managerialism impacted primarily in the Social and Communicative Domain of action affecting the group’s Sphere of Influence, within and beyond the institution. The problem of managerialism for #1 in Group 3 was that with increasing pressure on resources, an administrative policy had been introduced that only permitted short-term contracts at the General Staffing level. For Group 3's research activity, this administrative move was counter-productive. The value of the appraisal tool in this instance was that by weighting the political, economic and institutional dimensions of increasing managerialism, participants were able to identify the particular Sector of activity involved in constraining their research practice. The statements and weightings by #1 in Group 3, revealing the impact of administrative decision-making, at the broader systems level of action on research practice, are presented in Table 12.3. Statements in the Spheres of Influence Sector, it will be remembered, are those that indicated levels of influence exerted in a particular relationship or environment. The direction of influence was described in terms of its source and its consequences. The level of impact, in terms of constraint of research, was indicated by the weighting which the participant/researcher attributed to the statement.

**Table 12.3 :** *Social and Communicative Domain, Spheres of Influence Sector*  
*Participant Researcher #1, Group 3*

STATEMENT	Con/Fac	Sector	Wt
The Government is looking for savings in relation to this field of research.	c	5	1
University appointments mechanisms are highly bureaucratised and requirements for upgrading of positions present problems.	c	5	3
Can only appoint people on short-term contracts at the General Staffing level.	c	5	5

Although the examples given in these three illustrations of the issue of increasing managerialism focus on constraint of research practice, the weighting tool was equally as effective in identification of facilitative action. Participants/researchers could explain an

intuitive sense<sup>19</sup> of confidence in the effectiveness of action by using the sorted statements in the Profile to identify the nature of activities or circumstances that they had weighted as highly facilitating. For example, a clear theme that emerged during the critical reflective process for researchers in Groups 1, 2 and 4, was the importance of grounding management strategies for research in the existing social relations of inquiry processes. Such metalearning about the nature of appropriate management policies and practices was noticeably absent from the profiles of Groups 3 and 5, the two groups experiencing considerable difficulties. These groups appeared to be ‘centre-fleeing’ and were facing continual challenges in terms of social integration.

### **Participant Feedback on the Efficacy of the Tool for Quality Appraisal of Research Practice**

In Phase 4 of the study, participants were invited to critically reflect on the process they had engaged in and to comment on the efficacy of the appraisal process, using the three response categories provided by the researcher. These three categories were a paraphrasing of the authenticity criteria developed by Guba and Lincoln, in their monograph, *Fourth Generation Evaluation*.<sup>20</sup> The response categories included, were the Phase 4 Credibility and dependability measures and invited participants/researchers to comment on:

- (a) Whether or not the Project Feedback Summary had represented, with integrity, those conditions which facilitated or constrained them personally in their effective research activity (during the period in which the original discussions took place);
- (b) The extent to which this process had deepened their personal understandings about the conditions and actions which facilitated their research activity; and
- (c) The extent to which the understandings gained in this process stimulated and facilitated action on their behalf to improve the quality of the research environment.

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<sup>19</sup> Lincoln, E. G. & Guba, Y.S. (1985) *Naturalistic Inquiry*, Sage, Beverly Hills, California, pp.195-198.

<sup>20</sup> Guba, E.G. & Lincoln, Y. S. (1989) op. cit., pp. 245-250.

The 'standard' against which the efficacy of the tool was gauged, therefore, was the participant's/researcher's subjective experience of effective or ineffective moral-practical action for research. Of the original 25 participants/researchers, 21 received project feedback summaries. Of these 21 participants/researchers, 11 completed the final questionnaire and returned this to the author.

#### *Group 1 questionnaire respondents*

In Group 1, only one of the participants was in the country at the time the author returned with the questionnaire. The other members of the Group were engaged in fieldwork in another continent.

#### *Group 2 questionnaire respondents*

All but one participant in Group 2 returned their questionnaires. The remaining participant researcher who did not, was the group leader who was under considerable time pressure when the final interaction regarding the Questionnaire occurred.

#### *Group 3 questionnaire respondents*

In Group three, all participants involved responded to the Questionnaire, except one who had left their position and another who passed away during the time of the study.

#### *Group 4 questionnaire respondents*

Two of the three participants in Group 4 who completed the whole process responded to the questionnaire. A third had already dropped out of the study prior to the weighting activity because of pressure of work. The fourth participant in Group 4, the group leader, was unable to fill in the Questionnaire at the time of the researcher's return, because of the pressures involved in applying for Cooperative Research Centre (CRC) Funding. This Group leader did, however, show considerable interest in the outcomes of the present study, as a resource for the Centre's CRC application.



As a postscript, the leader of Group 4, while not returning the questionnaire, was pleased to report that their Cooperative Research Centre bid had been successful.

### *Group 5 Questionnaire Respondents*

In Group 5, two of the researchers had dropped out of the study prior to the weighting activity due to pressure of work, and one researcher who did complete the process had transferred to Hong Kong. Two of the original five participants who were still working in the Centre at the time the author returned with the Questionnaire indicated their interest in responding. Only one of these, however, the Administrator, was able to find the time to fill in the questionnaire.

The key to involvement in the final activity of the present study proved to be the opportunity for personal communication between the author and the participant concerned. All those who responded were able to spend a short time discussing the outcomes of the appraisal process with the author. The fact that personal interaction resulted in a hundred per cent return rate underscored the importance of dialogue as a key requirement of social relations, in use of this appraisal process. The responses from the eleven questionnaires that were completed have been collated as a critical reflective appraisal of the tool itself.

There was a unanimously positive response from all respondents to the first question. Every respondent confirmed the integrity of the interpretive and evaluative comments in their *Project Feedback Summary*. Comments such as the following are representative of the overall judgements regarding the integrity of the Summaries.

- . . . the summary is an accurate picture.
- The feedback summary is a good representation of the original discussion.
- . . . the feedback summary has represented those conditions . . . they provide a very interesting picture of the research environment as a whole at that point - and it is probably accurate now given the generic trouble-spots . . .

- . . . the feedback summary, while requiring some concentration to absorb, is an accurate representation of my comments about my work at the time of the interview.

This final comment was followed by some advice about the design and sequencing of the information in the project feedback summaries and resulted in changes to the structure, labelling and sequencing of the feedback summary booklet, thus simplifying the design. The participant suggested that :

The summary would be more effective if it was shorter, used less complex language, words rather than numbers where possible, used only one type of graph and avoided abbreviations.

Modifications which were made to the Summary presentations included :

1. Providing a one-page table of the action categories (Chart 10.1 in Chapter 10) or Domains and Sectors.
2. Locating the Sector definitions with the respective evaluative comments rather than in a summary table.
3. Placing the narrative evaluation first in the Project Feedback Booklet.
4. Placing the weighted/sorted table of statements for each of the respective sectors at the back of the Project Feedback Summary booklet, simply as a reference and possible resource for further work.
5. Using complete words in the table headings (modified again to fit thesis restrictions).
6. Using shading for the two key columns of Domain and Sector.
7. Providing only line graphs. This participant's group had been provided with two types of graphs, line and bar, and asked which they found most helpful.

Seven of the respondents included in their comment explicit reference to the fact that the profiles were an accurate representation of their research space, at the *time* the statements were recorded. This reference to *time* served as confirmation that profiles such as these are generated within temporal boundaries and that the interpretive and evaluative summaries were necessarily temporally-bound. As one participant noted :

The nature of research is such that circumstances change and evolve. The summary gives a very good understanding of the processes at the time. A snapshot in time.

Such comments only strengthened the argument for a transformational quality appraisal process, such as the quality appraisal tool used in the present study, to be utilised as a component of higher education legitimization and reward systems for research.

The original interview/discussion sessions were also bounded and focussed by the participant's concerns and priorities at the time of discussion. In effect, the research 'space' and the features of that space, were determined by participant's construal of action priorities at the time of recording. The conceptual maps of research space that emerged, showed only those features that were of direct relevance to the person concerned, at the level of theory-in-use. Other features that might have been noted in their research 'territory' were sometimes referred to in later reflections as something that they 'should mention'. Such possible additions were, for all practical purposes, not important to their action for research at the time the original discussions took place. It was this feature of the emergent design that provided in-depth understanding of the nature of the tool at the level of theory-in-use.

Responses in the questionnaire were triangulated with the claims, concerns and issues that emerged as important in both the individual's and the groups' weighting profiles. Some of the participant's comments regarding the the appraisal process, proved to be just

as much a reflection of their own level of metalearning about the nature of the research space in which they were operating, as it was of the appraisal tool.

One participant noted that:

. . . the interview process was well planned which has allowed the clear acquisition of data presented.

This participant was highly focussed, had a clear idea of their role, responsibilities and goals within the research space, and had made extensive use of conceptual mapping as a tool for articulating and communicating the nature of the research environment in which they were working. Another participant, however, observed that:

. . . original discussions were not carried out with a clear goal. The feedback shows this in its unevenness in dealing with specific matters.

This participant was a former researcher, who at the time of interview, was carrying out the duties of a senior research administrator as well as being involved in further study for a higher degree. The weighted profiles revealed a range of concerns in which the objectives of research management and policy-level theories of action about what was valued in research practice, were to some extent in conflict with the participant's experience of the nature of research in the field in which they were undertaking further study. The multiple focii which emerged in the interview were some indication of inferential incompatibility between the different construals of research that were present for this respondent. With the participant's primary function being that of research administrator, however, there was a strong bias towards the organisational domain in the statements provided. This response confirmed earlier findings which indicated that research practice and the management of research practice, can be qualitatively different activities.

The feeling that original interviews were unfocussed, was indicated by two other participants/researchers. One of these commented on the number of statements about 'other environments outside the research group'. Many of the skills and capabilities that this participant described when speaking about research activities, were in fact capabilities acquired outside the environment of the research group. The statements that this participant researcher indicated as relevant to 'other environments' were, however, an explicit description of the type of action that was highly valued in social relations and management practices within the group at the level of theory-in-use.

The other participant researcher, by implication, made a similar comment about the original interview. This participant researcher, during the final discussions, expressed their surprise at :

. . . the apparently coherent outcomes of what were broad and wide-ranging discussions.

The participant researcher who had made this comment indicated in the original interview, that for them, the research environment they were operating in, involved incompatible ways of construing research practice and the value of purposes being served. The action-oriented framework provided this particular participant with a broader cohesive framework for assigning value to activities within the research space. The value of the tool for better understanding the research environment was confirmed by this participant researcher's response to the second question regarding the extent to which the process deepened understanding about the value of action for research. He stated that the process:

. . . has crystalised some assertions which were somewhat diffused.

Two participants mentioned that aspects of their practice were not discussed, which implied these aspects of practice were not of immediate importance at the time the original

interview took place. The fact that these aspects of practice were missing from the profiles, was confirmation of this. One noted the absence as ‘interesting’. Another indicated that they would like to redress the absence of comment in the Discipline Base sector of the Conceptual and Theoretical domain, because this was ‘definitely facilitating’. There is a difference, however, between what *ought* to be facilitating in terms of theory of action and what *is* facilitating at the level of theory-in-use and it was the latter that had been recorded in the record of interview.

In the questionnaire, participants/researchers were also asked to reflect on the extent to which the process deepened their understandings about conditions and actions that facilitated or constrained their research practice. There was confirmation that the process enabled participants to step back from their immediate daily concerns and view activities from a broader systems perspective. This aspect of the process was found to be very helpful. One participant researcher noted that:

[t]he process has provided a greater objective (vs subjective) awareness of the facilitation and extent of opportunities offered in undertaking projects, the amount of responsibility given and expected of one, and my own sense of frustration in trying to do too many things too well with my present constraints of resources and staff. It has given me a better understanding of my own sensitivity to the demands and limitations of our current research environment.

Some participants found that the objectifying of their subjective validity claims enabled them to make explicit their underlying philosophy of practice.

It has certainly been useful to see expressed what I believe to be the weaknesses and strengths of the present situation - it has clarified for me, some basic philosophies.

Another commented that:

This process has made me realise and understand more about the organisational and conceptual [aspects] of my research activities.

The individual-group comparison proved very useful to one participant who suggested that such a comparison would be helpful if carried out with 'close-to-ideal' or more established, successful research groups. The possibilities for some form of benchmarking for quality research practice was developed from this feedback.

As mentioned in Chapter 9, a 'group average' could serve to raise awareness of significant areas of constraint, facilitation or tension within a group. The absence of specific qualitative information, meant that there was some motivation for individuals to follow up with their colleagues any noticeable areas of facilitation, constraint or tension, that were of concern or interest to them personally. This was confirmed by one participant researcher who commented explicitly that :

The most useful information is the comparison between the group weightings and my individual weightings. It would be interesting to determine if this is due to the different perspectives from which each member of the group looks at our activity.

For another participant researcher, it was motivation to act at an individual level that was most pertinent:

The process has helped to identify areas of research organisation that most urgently require further action.

One participant researcher, in particular, provided a constructive critique of the potential for deepening understandings about action that facilitates or constrains research and the potential of the tool for articulating tacit knowledge. His suggestions for refining the tool provided options for reducing the complexity of the feedback.

When reading the summary I did have several 'ah-ha' experiences. It reminded me of several things that in a sense I already knew, but that which I did not think clearly about . . . The most interesting points were areas of tension and areas in which one differed from the group. Perhaps the structure of the summary would be more effective if it first described the group, highlighting areas of tension then went on to focus on how the individual differed from the

group - again highlighting tensions. Then if someone is typical of their group in a particular domain it does not need to be restated.

Finally, participants/researchers were asked about the extent to which understandings gained in the process motivated them to take action to improve the quality of their research environment. The responses to this question were perhaps the most informative of all regarding the usefulness of the tool for organisational learning and organisational change. From the individual perspective, there were comments such as :

While working and producing, but under pressure, I must learn to say 'No' and to limit where possible, my involvement to areas of greatest strength. This will not easily happen until financial resources are available to provide additional support and equipment as well as to compensate those who work full-time in part-time positions.

In terms of organisational learning at the level of the group, one participant researcher noted :

At the moment our research activities are moving in a different direction and the people involved have either moved on or new people have arrived. However, although different constraints and tensions now exist, this summary is helpful in that it highlights the fact that such constraints and tensions do exist.

However, another participant's comments from the perspective of organisational change in the group, highlighted the limitations of the tool for organisational change.

I'm not sure about the feedback actually facilitating change. I know that's a terribly negative and pessimistic thing to say, but I feel that in some ways the feedback just reminds one how intractable our problems are. They really are deep structural problems, reinforced by long-held personality traits in the people involved. Changing these things is a bit like throwing bricks in the Grand Canyon.

A participant from the same group made a similar comment. It became very evident to this respondent, that the presence of senior management support for the change process,



was a necessary precondition for the use of the quality appraisal tool as a mechanism for organisational learning. The following insightful comments not only established a strong caveat for the use of the tool but also confirmed the usefulness of the appraisal process in illuminating the need for organisational change.

I believe that staff were truly motivated towards changing the research environment for the better. I was certainly extremely motivated but if the 'top' is not willing to change, then, in time, all motivation just drains away and I think people are even more depressed about that having seen what could, in fact, be achieved and how close they were to achieving it.

This same participant offered an explanation as to the nature of the problem at the level of theory-in-use.

. . . the Director . . . will not allow any structure to be fixed in place. [X] will only tolerate structure until it needs to be broken or bent or wiped out completely. But then [X] expects it to be back in place again the next minute. This only leads to acute destabilisation. Morale sinks and people learn to swim. Very soon there is only swimming and structure has gone forever. It takes too much energy to battle against this all the time.

It is comments such as these that raise the issue of appropriate ways of 'managing' research. On the central issue of 'managing' research, the process proved to be very useful as a tool for contrasting theory of action with theory-in-use and in facilitating articulation of a philosophy of action. The following responses give some indication of the potential of the process as a tool for critical reflective practice. Both sets of comments are from participants with a primary responsibility for managing research environments.

The exercise has provided insight into the the institution's position on research which evidently differs from that of DEET. In particular the concept of managing their research in the DEET sense is alien to established university philosophy. Basic research cannot be 'managed' by administrators - it is in the hands of the researchers themselves. Research is not a production-line activity. University administrators should not direct research except in the most fundamental way relevant to its faculty mix.

For this participant, the realisation of a basic philosophy of research practice, led directly to action. They went on to say :

The administrator facilitates research. One practical outcome of these thoughts is a change in name of the Office. ‘Management’ will be dropped from the Research Management Unit so we will become the Research Administrative Unit or just the Research Office.

The other participant concerned with managing research environments acknowledged the insights they had gained regarding the pressures on all staff in the research process. They cited the understandings they had gained, during the reflective appraisal process, regarding the difference between the ‘research staff’ and the ‘management of the Centre’. While this manager intended proceeding with plans to support researchers with information technology and improved budget systems, the process would now, he realised, be framed very differently.

What will change is that we will do so with greater discussion with all involved.

The critical reflections of this participant and others who responded to the questionnaire, demonstrate the metalearning which took place in the present study, about the nature and the efficacy of the collaboratively-developed quality appraisal tool. Participant’s reflections have been used here, to substantiate that enhanced understanding about the appraisal process was achieved in the study, by objectifying metalearning about the tool, at the level of theory-in-use.

### **The Efficacy of Tensions as a Central Design Feature**

The layout of the weighting grid, based as it was on a double-sided weighting system serendipitously revealed an unforeseen function of the process for quality appraisal purposes. In the process of weighting some activities or circumstances, it became evident that there were both constraining *and* facilitating aspects to the action involved. In retrospect, it can be seen that the construct CONSTRAINING < - - - >

FACILITATING was, in such cases, too limited for contrasting effective with ineffective action.<sup>21</sup> At the time, participants were simply asked to indicate to what level the activities or circumstances constrained their research practice and to designate this level with a weighting on the *constraining* side of the grid. Conversely, they were also asked to do the same for the level of facilitation on the *facilitating* side of the grid. These two weightings, on either side of the grid were then linked to indicate a tension or unresolved conflict within their research space. The distance between the the two weightings was taken to be an indication of the level of tension experienced by the participant in their daily research practice. Participants confirmed, during the process, that the the level of tension represented in this way provided them with a ‘measure’ that corresponded directly with their experience of the activity or circumstances described in their statement.

The following illustrative examples are taken from different participant’s responses in the Organisational and Managerial domain of action. Column headings have been modified firstly to indicate the evolution of language for describing components of the appraisal tool (Indicator has been changed to Statement) and secondly for practical purposes, to fit the table on the page. While the original weighting process, indicating tensions, was carried out on the full grid as in Table 12.4, the Project Feedback Summary Weighting Profiles, presented only the outcomes of the weighting process.

**Table 12.4 :** *Value of Action for Research Practice Grid*

Domain	No	Comments	C/F	Constraining					0	Facilitating					Sect
				5	4	3	2	1		1	2	3	4	5	
Org. & Manag.	25	The group has grown so much that we now need a formal structure to indicate who is responsible to whom.	C/F			3	<	-	-	-	>	3			1

<sup>21</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p. 12.

During the weighting process, it became evident that there were three qualitatively different types of tensions. These different types of tension are explained as follows :

1. Tension \*1

Tensions with a positive bias (Table 12.5), where the weighting on the *facilitating* side of the grid was higher than that on the *constraining* side of the grid.

Table 12.5 : Tensions With a Positive Bias

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Unit is a functioning group of individuals.	c/f	1	1	4	4	3

In column 2, c/f denotes that there are *both* constraining and facilitating aspects to this activity or situation. Column 3 (Sector), denotes the Sector of activity while column 4 (C), indicates the level of constraint and column 5 (F), the level of facilitation. Column 6 (Tens), demonstrates the degree of tension calculated by the number of possible weightings in between. Column 7 (Tens/bias), the positive bias in this tension is calculated by the number of other possible weightings on the *facilitating* side of the grid.

2. Tension \*2

Tensions with equal levels of constraint and facilitation (Table 12.6), where the weighting on the *constraining* side of the grid was the same as that on the *facilitating* side of the grid.

Table 12.6 : Tension with Equal Levels of Constraint and Facilitation

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Being involved in the Unit's activities can be distracting from higher priority research because they may come back for more input when you think you have finished.	c/f	2	5	5	9	0

3. Tension \*3

Tensions with a negative bias (Table 12.7), where the weighting on the *constraining* side of the grid was higher than that recorded on the *facilitating* side of the grid.

Table 12.7 : Tensions with a Negative Bias

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
The Unit had recently appointed someone from the commercial/industrial sector for management and promotion but cultural differences meant that this was not successful.	c/f	1	4	1	4	- 3

Implications of the Tensions for Grid Analysis

Drawing on the Corollaries of PCT, and discussions with a colleague researching in the area of PCT,<sup>22</sup> the meaning of tensions and the qualitative differences demonstrated between different types of tensions, may be explained in the following way.

Participants used the weighting grid to indicate that there were *both* constraining and facilitating aspects to circumstances or activities. This variation in the use of the grid, occurred because the construct CONSTRAINING < - - - > FACILITATING, provided by the researcher, was too limited<sup>23</sup> for the participant to contrast effective with ineffective action. However, the attempt to contrast facilitating with constraining action for the particular instance described, was sufficient to signal the need for a higher order construct to resolve the tension, a construct that was

<sup>22</sup> These insights emerged in discussions with Chris Stevens whose in-depth analyses of PCT can be followed up in Stevens, C. *Understanding Personal Construct Psychology as a Radical Constructivism*, thesis submitted in partial fulfilment of the requirements for Bachelor of Arts (Hons), Psychology Department, University of Wollongong, June, 1994.

<sup>23</sup> Kelly, G. quoted in Dalton, P. & Dunnett, G. (1990) op. cit., p.12.

appropriate to the participant’s own construct system. While constraining or facilitating aspects were still present, the participant was able, with the use of the grid layout, to indicate both the nature of the tension and the directional trend of the activity or situation, with regard to effective action for research. Both the directional trend, indicated by a tension bias, and a stasis, indicated by equal weightings to constraining *and* facilitating aspects, could be represented clearly, using the grid layout.

**Implications of Different Types of Tension**

The implications of the different types of tension for analytical purposes, are explained using examples a range of participants/researcher’s responses in varied domains and sectors of activity.

**Tension \*1 - Tensions with a Positive Bias**

A positive bias to a designated tension indicated that the participant’s construal of the activity or situation enabled them to generate creative and productive strategies for action. The magnitude of the positive bias was an indication of how effective their strategies, based on a construct of their own choosing,<sup>24</sup> were in dealing with the respective constraints.

**Tension \*2 - Tensions with Level of Constraint Equal to Level of Facilitation**

**Table 12.8 :** *Tensions with Equal Levels of Constraint and Facilitation*

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Both qualitative and quantitative methodologies are useful in this research which can bring together disparate disciplines but this leads to argument between proponents of qualitative and quantitative.	c/f	3	4	4	7	0

24 Ibid.

The presence of a tension where the level of facilitation was equal to that of constraint was an indication that quite different and conflicting ways of construing the activity or situation existed within the research space. The example in Table 12.8, is taken from the Conceptual and Theoretical Domain of action.

A second example of equal levels of constraint and facilitation is demonstrated in Table 12.9.

**Table 12.9 : Tension from Inferentially Incompatible Construction Sub-Systems**

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Pressure to hire managers is a contradiction with the research brief but we need to know how to manage.	c/f	1	3	3	5	0

It could be presumed that the individual represented in Table 12.9, was employing different construction sub-systems that were inferentially incompatible with one another. The conflicting ways of construing the research space were, in this case, contained within the participant’s own construct system.<sup>25</sup> However, the other and more frequently appearing tension of this type, was an indication of unresolved conflict between alternative ways in which different participants framed the particular action and purposes being served in the research space.

A third example of equal levels of constraint and facilitation is explained in relation to Table 12.10.

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<sup>25</sup> Ibid., p.13.

**Table 12.10 : Tensions with Equal Levels of Constraint and Facilitation**

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Organisational & Managerial Domain Management and entrepreneurial processes set up tensions amongst academics because they appear to be imposed.	c/f	1	3	3	5	0
Conceptual & Theoretical Domain In this area of research you need to question everything and to build something much stronger.	c/f	3	3	3	5	0
Social & Communicative Domain The organisational structure for Centres with their constraining linkages to the University are inappropriate for the Unit's activities.	c/f	5	3	3	5	0

Tensions of the type represented in 12.10, referred to the dialectical relationship between institutionalised or bureaucratised ways of framing, acting, understanding or social relationships, and alternative ways which were more appropriate to the respective research pursuits. The degree of tension was an indication of the level of impact the activities or circumstances have on the participant's research practice.

**Tension \*3 - Tensions with a Negative Bias**

An indication that activities or circumstances were undermining their effective action was evident when the participant's weighting resulted in a tension with a negative bias (Refer back to Table 12.1). A negative bias also indicated that the way in which they were currently construing the activity or situation prevented them from generating strategies for dealing with or overcoming the negative impact of the activity or situation on their research practice. The magnitude of the negative bias was an indication of how ineffective their strategies were in dealing with the respective constraints.



Implications for the Use of Tensions as an Analytical Tool

There are a number of analytical and developmental activities that could be followed up, using these weighting profiles and PCT, particularly the building of personal construct systems using tensions as a starting point to elicit elements. The potential of the weighting grid as a background resource for further analysis can be seen in the statements and weightings in Table 12.11, from the Project Feedback Summary of one participant researcher.

Table 12.11 : Potential as a Resource for Further PCP Analyses

STATEMENT	Con/Fac	Sector	C	F	Tens	Ten/bias
Organisational & Managerial Domain The Unit operates as a functioning group of individuals.	c/f	1	1	4	4	3
Organisational & Managerial Domain The Unit provides a tacit structure that enables a large number of people to be pulled in to solve a problem and to tackle issues that they wouldn't normally be involved in but this pulls researchers away to issues that are separate from their own research.	c/f	1	5	4	8	-1
Organisational & Managerial Domain For research in this area, 'pairs of hands' for collecting information and time for discussion are the most important types of support needed.	c/f	2	5	5	9	0
Organisational & Managerial Domain Access to grants funding is the main priority for every Unit researcher involved in the group and teaching in the School.	c/f	2	5	4	8	-1
Social & Communicative Domain Researchers in the School are very independent people but are prepared to join together for the time it takes to solve a particular problem.	c/f	3	4	4	7	0

A range of constructs and a number of like elements are present in these statements. However, development of PCT processes was beyond the possibilities afforded by time and level of involvement, with the groups in the present study. The aim of the study was to develop an easy to implement and interpret tool that researchers themselves could use for critical reflective practice. In its original form, Table 12.6, because it was easy to implement and to interpret, the grid developed in the hermeneutic processes of the study proved to be such a tool.

The presence of tensions in the research space emerged as a rich source of information about the dialectical relationship between contestation and institutionalisation in research practice. The limitations of the researcher's construct CONSTRAINING < - - - > FACILITATING proved to be a window into the directional trend of activities or conditions towards effective or ineffective action for research. By drawing on contrastive poles within their own construct systems in order to make decisions about the effectiveness of action for research, participants demonstrated the potential of the appraisal tool as a transformational reflective process.

### **Use of the Tool for Feedback in Organisational Learning Processes**

Furthermore, the possibility of using the reflective appraisal tool to both facilitate and monitor a movement towards more effective practice, was raised by one of the research managers. Seven months had elapsed between the original discussions in which the research manager's claims, concerns and issues were recorded, and the weighting process using the grid. For this participant, whose principal brief was to initiate and facilitate change, the weighting tool provided a mechanism for review, monitoring and internal benchmarking.<sup>26</sup> He commented that the weightings he would have attributed to the activity or conditions at the time of the original discussions were different from those which he would give currently because the change processes had been under way for a

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<sup>26</sup> Macneil, J. & Rimmer, M. (1993) 'Benchmarking in Australia: The State of Play' in *Asia Pacific Journal of Quality Management*, vol.2, no.3, p.30.

number of months. A decision was made to enter both weightings on the grid and to circle the weighting (\* in this thesis) that would have been attributed during initial discussions and the current weighting (uncircled) would be used for the purposes of generating the profile. It was decided to link the two weightings with an arrow to indicate the directional trend towards more effective action, in the changes. The protocol developed as a result of these insights is illustrated in Table 12.12.

**Table 12.12 : Value of Action for Research Practice Grid**

Domain	No	Comments	C/F	Constraining						Facilitating					Sect
				5	4	3	2	1	0	1	2	3	4	5	
Org. & Manag.	3	There has to be a balance between the Centre's business side and its attachment to the School.	C->F			3*	-	-	≥	1					1
	7	We will still go down the path of being a better business but will be sensitive to workload pressures.	C->F		4*	-	-	-	-	≥	3				1
	8	The essential component of organisational change to a matrix structure is complete delegation for required tasks but this has to be balanced with measures of good performance.	C->F				2*	-	-	≥	3				
	9	The development of measures of good performance are necessary for the effective operation of a Matrix structure so that effectiveness can be communicated and monitored.					2*	-	-	≥	3				

One option raised by this participant in the course of the dialogue, was the possibility of identifying a desirable weighting to aim for in organisational learning. In effect, this participant was recommending a form of internal benchmarking for quality improvement purposes.

While the observation of change over time occurred only in the Social and Communicative Domain, the implications of these insights for further development and use of the tool were significant. Once again, the qualitative differences between research practice and management activities was made apparent. Researchers rarely made an observation that the value of a described activity or conditions for research had changed over time. However, all administrative or management participants noted such changes. This focus for weighting statements was further indication that the claims, concerns and issues of administrators and managers were qualitatively different from those of researchers, but that such statements could be readily accommodated within the action-oriented framework. Given that a sphere of social life is defined as such by its activities, language and social relations, the qualitative distinction between 'management' and 'research' is perhaps evidence to suggest that research and management, like writing and editing,<sup>27</sup> are processes that work in opposition. It is this proposition that will be examined in the national Evaluations and Investigations study of research management practices in higher education<sup>28</sup> which employs the appraisal tool developed in the present study.

The value of the appraisal tool for objectifying and critically analysing subjective validity claims, was further demonstrated in this workshop with Group 3, for which the author

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<sup>27</sup> Elbow, P. (1973) *Writing Without Teachers*, Oxford University Press, London, pp.4-7.

<sup>28</sup> Murphy, P., Curtis, S., Aylward, D. & Hill, S. (1994) *Evaluations and Investigations Program Inquiry into Quality Management in University Research, Progress Report*, August, Centre For Research Policy, University of Wollongong, Wollongong.

was asked to facilitate a review of current organisational and conceptual practices. This workshop occurred during the course of the present study so the insights gained by the author, with regard to the appraisal tool, have been included in this chapter.

All members of the Unit in which Group 3 was located, who were to attend the workshop were, with one exception, present at the morning session. Apart from six of the twenty-eight attending the workshop, none of the others had previously experienced the reflective appraisal activities developed in the present study. Because the author was facilitating the workshop, some of the reflective appraisal practices developed in the present study were used as process tools. The first session of the day's activities involved participants in identifying and weighting claims, concerns and issues that related to activities within their research space. The first task was to draw a conceptual map of their research space as a resource for sharing understandings about everyday action for research. The second task was to use the weighting grid to attribute significance to a range of claims, concerns and issues that had emerged. In combination, these activities had served to both illuminate and make explicit, the action systems that made up the group's organisational, intellectual and social environments. The conceptual mapping, in particular, gave rise to a wide range of insights that were integrated into subsequent discussions using the weighting grid. With the use of the weighting grid, actions were distanced from immediate personal conflicts and as a result, many claims, concerns and issues were raised and dealt to the satisfaction of the group.

The one participant who had been absent from the morning session of the workshop, had missed the cognitive mapping and weighting activities that necessarily involved the surfacing of subjective validity claims, explanations and discussions. An issue that had been dealt with earlier in the context of broader action systems, was raised again by the late-comer. However, without the benefit of a tool for objectifying their subjective validity claims about the issue, the participant initiated a personal attack on one of the other group members and locked discussion into adversarial mode and single loop

learning behaviours.<sup>29</sup> The rest of the group who had been engaging in critical reflective practice and moving towards the possibility of double-loop learning, were either excluded from the dialogue or called on by the late-comer to verify and support the adversarial position they had taken. The situation was diffused by members of the group who had participated in the morning session's communicative dialogue and who drew the interaction back to seeking understanding, rather than exerting power over, fellow participants. The heated interchange, however, did provide a dramatic illustration of the type of social relations that are a necessary precondition to surfacing subjective validity claims and the possibility of making such claims the object of critical reflective practice.

While participation in the workshop process resulted in the emergence of a range of new insights and development options for the group, the absence of follow-up activities, particularly on the part of the group leader, tended to dissipate the gains that were made during the workshop.

The most important insight for the present study was that the critical reflective appraisal tool needs to be utilised as a component of ongoing improvement processes, if its use is to facilitate desired changes in activities language and social relations. What the appraisal tool did achieve for Group 3, was the creation of a public space<sup>30</sup> in which subjective validity claims about the meaning and value of action for research could, through the weighting process, be surfaced and objectified. This is a necessary precondition for what Habermas<sup>31</sup> has proposed is the first step in negotiating the shared situation definitions necessary for communicative action. Without this step, the individual within an organisation and therefore the organisation itself<sup>32</sup> is limited to single loop learning and reduced flexibility, adaptability and responsiveness.

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<sup>29</sup> Agyris, C. & Schön, D. A. (1978) *op. cit.*, p.2.

<sup>30</sup> Bernstein, R. J. (1983) *op. cit.*, pp.208-209.

<sup>31</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds) *op. cit.*, p.264.

<sup>32</sup> Agyris, C. & Schön, D. A. (1978) *op. cit.*, p.11.

## Conclusion

The outcomes of the present study, presented in Chapters eleven and twelve, have demonstrated that with some caveats, an action-oriented framework for quality appraisal of research can be generated through formative evaluation<sup>33</sup> processes. The inquiry outcomes have also demonstrated that progress in communicative rationality<sup>34</sup> is possible, through metaevaluation of appraisal practice, and that there is a means by which appraisal practices could serve continuing development of quality standards. The use of such practices could balance the current bias towards output-oriented, performance-based legitimization and reward systems.

Specific conclusions regarding the efficacy and usefulness of the tool developed in this thesis, were integral to the collaborative, reflective experience of those who participated in the study and have, therefore, been presented in the context of the unfolding inquiry design. In the earlier chapters this study demonstrated both how and why current output-oriented, performance-based indicators are grounded in a framework of standards that are inherently inadequate for quality appraisal purposes.<sup>35</sup> Based on this evidence, the thesis concludes that if researchers continue to rely on output-oriented, performance-based indicators at the level of the institution, the possibilities for them responding effectively to the increasing demand for quality assurance information are very limited. The reflective inquiry processes of this study have shown that an appraisal framework based on action theory can be used to generate valid *process measures* of quality research practice for quality appraisal purposes. Because process measures are grounded in the value of action for research, they are capable of providing both information for quality appraisal of research practice and also formative evaluation data for ongoing quality improvement purposes.<sup>36</sup>

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<sup>33</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

<sup>34</sup> Habermas, J. (1984) op. cit., pp.106, 119.

<sup>35</sup> Curtis, S. J. (1993b) op. cit., p.52.

<sup>36</sup> Guba, E.G. & Lincoln, Y.S. (1989) op. cit., pp.189-190.

This study provides a model of how research practitioners can develop appraisal frameworks and methodological tools theoretically congruent with research as a sphere of social life. The enhanced quality appraisal skills, capabilities and tools developed in this study incorporate strategies that, in Habermasian terms, facilitate enhanced capacity to objectify moral, practical insights into the meaning and value of everyday practice.<sup>37</sup> The action-oriented framework and quality appraisal tool developed in the course of this collaborative, reflective inquiry, demonstrated that it was possible to condense the meaning and value of action for research at successive levels of aggregation, while still maintaining the integrity of the action profile.

In the study, aggregate weighting profiles were used to capture the *merit* or intrinsic action value of respective Sectors of activity for effective research practice. The weighting process, as the central design feature of the methodological tool, was oriented towards enhancing the possibility, both of self understanding and of shared understanding, about what effective action for research *meant* at the level of practice. A congruence between case reports, the Value of Action for Research Profiles, Project Feedback Summaries and Across-Groups Profiles presented in this thesis, confirmed the integrity of *process measures* for quality appraisal purposes. The reflective inquiry demonstrated that a weighting for a given element or category of action for research, was an objective indicator of effective praxis.<sup>38</sup> In other words, the weightings were an indicator of the metalearning achieved through the dialectical relationship between finding out about the value of action for research, and acting in ways that resulted in more effective practice.<sup>39</sup>

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<sup>37</sup> Habermas, J. (1982) 'A Reply to My Critics', in Thompson, J.B. and Held, D. (eds) op. cit., p.228.

<sup>38</sup> Zuber-Skerritt, O. (1991) op. cit., pp. 26-27.

<sup>39</sup> Bawden, R. 'Towards Action Researching Systems' in Zuber-Skerritt, O. (ed) (1990) op. cit., pp.26-27.



For the purposes of the present study, the most significant inquiry outcome was that action-oriented profiles could provide both qualitative and quantitative information about the value of action for research. The quality measures thus generated were directly relevant to quality assurance of research practice itself, rather than simply derivatives of that practice. Because the profiles made explicit the metalearning that underpins development and renewal of researching capability, they furnished research stakeholders with information that addressed directly the inadequacies of current performance appraisal frameworks. In effect, the profile data made the research stakeholders' claims about effective action for research directly accessible and publicly-testable.

The study demonstrated that the appraisal tool was capable both of enhancing and affirming the values and identities of participants/researchers. This was particularly evident in the research environment of Group 4, with its highly successful organic management practices. The synergies between the Government's funding of collaborative research activity and the nature of social relations in this field of knowledge, were one example of indicators of effective action for research in policy initiatives identified through use of the appraisal tool.

However, the appraisal tool also demonstrated that legitimization and reward policies, if oriented towards technical and strategic interests for accountability purposes, could inappropriately direct research activity. This was shown to be the case with the tension between Group 2's integrated development strategy and the policy-led legitimization demands for more easily-accessible, accountability-oriented performance indicators. The inability of such performance-based indicators to acknowledge or reward Group 2's successful development strategies was an indication that current performance indicators could serve to undermine the relations of knowledge by failing to value those activities that assure sustainability and leading edge status. In each case, however, one involving synergy and facilitation, the other, distortion and constraint, the study demonstrated that

information generated using an action-oriented framework and transformational, process-focused 'measures', could provide for enhanced understanding of the meaning of Government priorities at the level of research practice. Without such information, institutional administrative managers are disempowered in the establishment of appropriate measures of quality research practice. As a result their effectiveness in strategic priority-setting for resource allocation purposes is impeded.

The qualitative and quantitative profiles provided in the Project Feedback Summaries were confirmed, in Phase 4 of the emergent design, as a resource for enhanced understanding about the value of action for research. The Value of Action For Research Practice Grid was shown to provide a mechanism for internal benchmarking of effective research practice. The Individual-Group Profile comparisons were acknowledged by participants/researchers as a source of motivation for seeking shared understanding about Sectors of activity where levels of facilitation, constraint or tension diverged.

While the potential of the tool was not fully explored in the present study, the indications were that the appraisal process could generate information of value for organisational learning. Furthermore, the various levels of aggregated Sector Weighting Profiles and their related Feedback Summaries illustrated that an action-oriented appraisal framework could provide accessible information for institutional priority-setting. This was possible because with the action-oriented framework decision-making could be based on demonstrated synergies between institutional goals and effective research practice. Furthermore, the Across-Groups Aggregate Weightings Profiles indicated the potential for the information generated, using the appraisal tool, to serve as the basis for negotiation of shared definitions of effective action for research. In this institution the Quality Profiles could have been used to address the problems caused by inflexible personnel policies.

Overall, the study demonstrated that by engaging in critical reflective practice participants/researchers could use their knowledge of everyday practice to develop differentially-weighted, quality research environment profiles that made explicit:

- which activities did or did not count as valid evidence of quality research practice (as in the case of Group 3's commitment to informing its constituents of research outcomes);
- what were or were not accepted as legitimate orders of social relations (as in the case of Group 4 whose organisational arrangements were driven by the knowledge imperative); and
- the nature of legitimisation and reward systems which did or did not serve to sustain and enhance researching capabilities and academic identity (as in the case of Group 2's integrated development strategy).

The action-oriented, quality appraisal profiles did provide the type of information that could facilitate continual improvement in the processes that sustain effective research practice. The integrated quality research environment profiles incorporated both qualitative and quantitative data that could explain the level of facilitation as well as the reasons why particular categories of action were effective for research practice.

Based on the Habermasian framework of social action, information such as this, which is grounded in the social relations that sustain and renew researching capabilities, could be used to balance the current one-sided focus on instrumental appraisal practices. In the case of research, these appraisal practices are oriented to meeting the accountability needs of the system. In this study, it was evident that crisis situations did arise when the organisation responded to a one-sided quality appraisal focus on performance-based measures. The groups that appeared to be centre-fleeing were an example of what can happen when an institution fails to acknowledge or support important aspects of research practice. Amongst the participating groups, the destabilisation of processes of social integration and high levels of constraining and undermining tensions were made clearly

evident in the weightings profiles. The tensions evident in these profiles provided a window into the type of activities and practices that can undermine research as a sphere of social life. In this respect, the tensions in Groups 3 and 5 provided an explanatory profile of the inadequacy of currently-held theories of action for assuring the quality of research practice. Alternatively, the profiles demonstrated that tensions that were creative and productive, as in Group 4, served to facilitate improved practice and the sustainability and flexibility of research as a sphere of social life.

### **Implications for Quality Appraisal of Higher Education Research**

Based on the inquiry outcomes in Chapters 10, 11 and 12, the thesis concludes that if the very processes that secure, sustain and renew flexibility and responsiveness in research pursuits are not made explicit in quality appraisal frameworks, they cannot be valued or assured.

The information generated in the qualitative and quantitative profiles has the potential to provide researchers with a platform from which to negotiate the nature of quality appraisal standards with institutional administrative managers. If researchers chose to do so, the standards that can be generated using the weighting process could be used for establishing internal benchmarking data for quality research environments. In this respect, the profiles could be used to inform priority-setting for infrastructure provision and capability development programs, across the diversity of research contexts.

Access to the type of quality profile information developed in this study, would enable research leaders and institutional administrative managers to better interpret the meaning of performance indicator outcomes. It is this type of understanding that is required by key stakeholders if they are to meet their obligations to sustainability, flexibility and renewal of effective research practice. Therefore, this thesis concludes that the Value of Action for Research Profiles do provide an alternative, but complementary, quality appraisal system for higher education research.

Finally, if the government and higher education administrators want to make the best use of the creative and innovative resources that higher education research pursuits provide, then it will be necessary for them as stakeholders, to ensure that the knowledge imperatives of effective research practice function effectively as the dialectical counterpoint to economic imperatives. While it is inevitable that quality appraisal frameworks will be biased towards the information needs of political and economic systems, this study shows that researchers can have at their disposal, quality appraisal tools that empower them to challenge systems' level imperatives for legitimating action and for setting resource allocation priorities. In this respect, the thesis is a beginning and not a resolution. Both the action-oriented framework and the methodological tool developed in this reflective inquiry, are preliminary models of appraisal practices that could serve to increase the transparency of higher education processes. They are a plan for future action, and as such, still in process.

**APPENDICES**

## **Appendix 1 : Journal entry #2, Inquiry Focus at Commencement of Study**

Inquiry purpose : To examine the logical processes involved in research which seeks to generate grounded theory and provide for informed appraisal of an activity or entity. Through such an examination, this inquiry will attempt to draw a conceptual map for guiding grounded theory research as well as providing the basis for its appraisal.

**Thesis focus :** This study explores the phenomena related to human intelligence as instrument<sup>1</sup> for determining significance and value in the process of meaning-making. It focuses on research and evaluation activities which rely on the evaluative and interpretive functions of human intelligence engaged in meaning-making. . .

**The rationale for this approach to the study was stated as follows:**

There is something missing in both the doing and the evaluation of this type of research (theory-generating), something that requires us to go beyond both the rigid constraints of the scientific method and the self-referrent appraisal and relativism of constructivist thinking. I believe that the way forward is to examine human-as-instrument in meaning-making process. An examination of the processes involved would enable the development of relevant and appropriate indicators for guiding researchers in the process of inquiry and for judging the quality or success of such research.

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<sup>1</sup>Guba, E. and Lincoln, Y. S. (1981) *Effective Evaluation: Improving the Usefulness of Evaluation Results Through Responsive and Naturalistic Approaches*, Jossey-Bass Inc., San Francisco, California, Ch. 6.

## **Appendix 2 : *Journal entry #3, Inquiry Focus Prior to Commencement of Fieldwork***

The inquiry should focus on research enterprises as learning communities. My aim will be to develop a profile of indicators that are directly related to the types of infrastructures supporting learning, innovation and creativity in research.

By mapping, interpreting and appraising the different qualities constituting a particular research enterprise, I will be able to relate the learning community profiles to the range of research outcomes that emerge and what counts qualitatively as research 'strength'. Through this process, I will be able to develop indicators of merit and worth directly related to the key activities within the research enterprise, indicators that are not purely product-oriented, financially driven and status-bound.

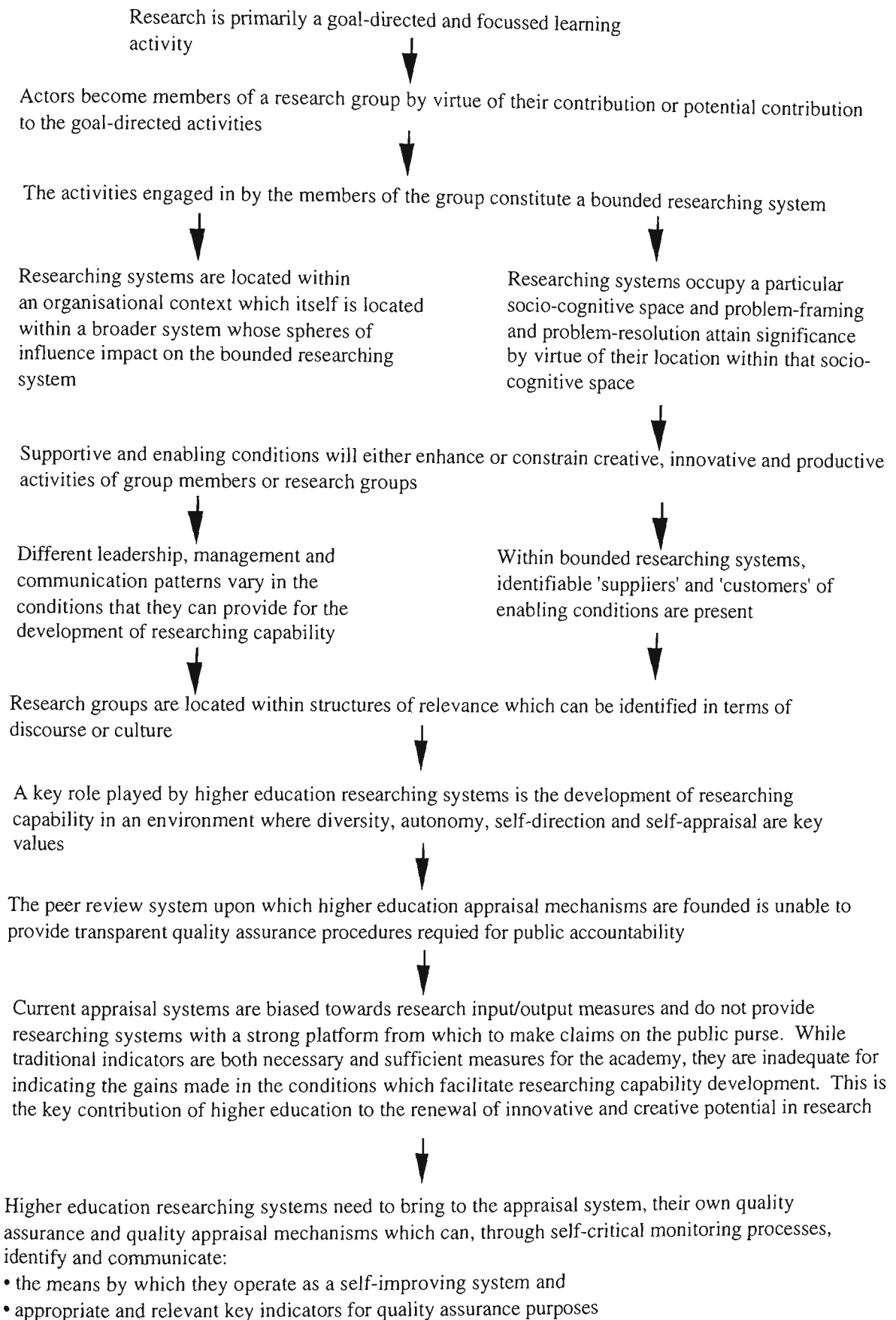
Indicators must relate to the lived experience of the researcher rather than be biased towards easily standardised, algorithm-friendly solutions for determining legitimacy, merit and worth. The processes which underpin the merit and worth of a particular values framework are the ground from which standards should emerge.

The options for framing the inquiry at this stage include:

1. A comparative analysis of traditional and innovative learning communities within the Australian Research culture.
2. Patterns of innovation in learning communities and emergent indicators for judging success.
3. A study of the human factor in the research enterprise



### Appendix 3 : *Researcher's Conceptual Map of Area of Thematic Concern*



## **Appendix 4 : *Journal entry #4, Claims, Concerns and Issues at the Level of The Institution***

### **Concerns re Activities**

Are 'selectivity' and 'concentration' necessarily the right way to go if we are to support creativity and innovation in research? Given the potential of organisational, institutional and knowledge structures to constrain creative and lateral thinking patterns - will selectivity and concentration be realising innovative potential or suppressing it? Will a 'critical mass' of research personnel and resources necessarily generate creative outcomes or incremental conformity?

### **Concerns re Language**

Can there be a meeting of the ways with creative researchers, senior executive and 'bean-counters'? Are their operating paradigms so different that no meaningful liaison is really possible? What sort of liaison strategies could be adopted to build bridges between these different worlds? What rational framework could support such liaison and what would be the common measures or indicators of legitimacy and success? How can the different perceptions of time and the constraints these perceptions generate be mediated through communicative strategies?

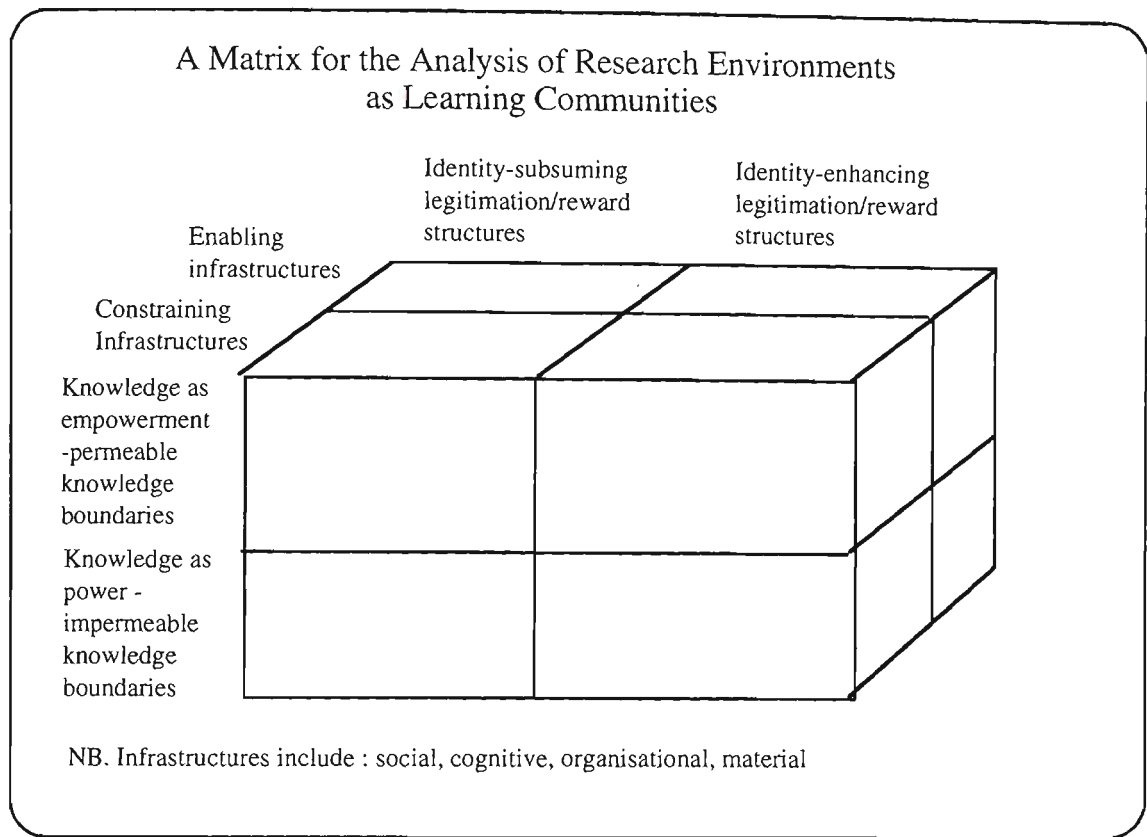
The pivotal question then becomes, What metaphors SHOULD underpin the preferred definition of research, and as a consequence, what explanatory and evaluative terms could emerge as appropriate? What paradigm would such a metaphor be grounded in and what logical and methodological frameworks would permit inquiry into the nature of research defined in such terms?

## **Concerns re Social relations**

To answer such questions, the phenomena of research must be unpacked - the contexts of research from the contexts of legitimation, the cosmopolitan from the market domains and the empowering from the constraining styles of research leadership, the identity-subsuming from the identity-enhancing legitimation and reward structures. The time-honoured and delicate balance between unbounded intellectual activity and bounded goal-oriented activity in the lived experience of the researcher must be examined in order to adequately define the nature of the activity that constitutes 'quality' research as a meaning-making process. The interplay between the functions of research management and research leadership constitute the core issue for such an inquiry.

The conceptual model developed in conjunction with these reflections provided a useful underpinning for later insights into processes of institutionalisation and contestation in quality appraisal of research. In the process of the inquiry, the model in ppendix 5, was refined further to focus more closely on legitimation and reward systems. The refined model is presented in a later chapter of the thesis.

APPENDIX 5 : *A Matrix For the Analysis of Research Environments as Learning Communities*



## **Appendix 6 : *Journal entry #5, Claims, Concerns and Issues at the Level of The System***

### **Issues re practices**

Will the pressures to produce within the time frame of the funding cycles and employment contracts inhibit research programs and create 'tunnel vision'? The phenomenon of institutionalisation of research in this case may prove to be counter-productive.

The research granting schemes are founded on a peer review network. Given the social dimensions of this network, the older, more established universities may have a distinct advantage. This is because of the 'sedimentation' of expertise and status within the network structures. The younger universities lack this power and access to the peer network so they may have difficulty attracting research funding. Will the concentration and selectivity platforms established on the competition amongst research communities simply compound the current access to funding problems? Is 'bigger' necessarily better, or will 'bigger' simply ensure conformity to incremental growth within stable structures? Will research centres present opportunities for creative leadership to facilitate innovative and creative research, or will they become simply strategic tools for instrumental research?

### **Issues re legitimisation and reward**

On what platform can researchers and research communities establish and maintain their identity ? Members of a research community, through training, immersion and association possess strategies for making judgments and decisions within the established boundaries of their research communities. The traditional research community, however, has little experience of market-oriented strategies for making

explicit, communicating and operationalising research outcomes from a competitive platform. The outcome of such naivety in a context of economic rationality limits significantly, material resources to which the research enterprise can legitimately lay claim.

### **Issues re discourse and power**

Perceptions of 'time' given a production metaphor base are qualitatively different from the nature of time as conceptualised in the research enterprise. This variance may ultimately create intolerable conflicts between the managers of research and the leaders of research enterprises.

Using the Foucaultian concept of power<sup>2</sup> - not object or entity, but action which structures the possible field of action of others, the relationship between the dominant discourse of economic rationality and the discourse of research based on exploration and generation of knowledge, the issue of power becomes highly relevant. By 'analysing power from the point of view of its internal rationality . . . analysing power relations through the antagonism of strategies'<sup>3</sup> in the actions which structure the actions of the researcher, it may be possible to unpack the purposes being served, the strategies and their relationship to outcomes.

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<sup>2</sup>Austin-Broos, D. J. *Creating Culture*, Allen and Unwin, Sydney, Australia, 1987, pp.234-235.

<sup>3</sup> Dreyfus, H. L. & Rabinow, P. (1983) *Michael Foucault: beyond structure and hermeneutics: with and afterword by an interview with Michael Foucault*, 2nd. Edition, University of Chicago Press, Chicago, p.210.

## **Appendix 7 : Reconnaissance Discussions, Host Institution**

### **Indications of institutional language for legitimation and reward of research within the host institution**

- There are progressive ideas at this university. People tend to be more critical. (R#11)
- The DVC Research cuts across the Dawkinsisms - he believes it is very important to maintain a scholarly tradition. His approach is very much appreciated in Humanities and Social Sciences because he sees that while it is inexpensive - it is very important. (R#11)
- The VC proposes that institutions must develop at the postgraduate level with specialised teams or experts and retain and support these people in special research Centres to contribute to the cutting edge of [research] skills. (Public comment R#12)

### **Indications of institutional practices for legitimation and reward of research within the host institution**

- The university was started at a time when there was a real shortage of academics and people were seconded from secondary education. The institution had many 'protected spaces' and comfortable academics on tenure - the feeling of a dead place with not much turnover. It took a long time for the institution to attract high calibre staff. (R#9)
- There was a great deal of division and conflict for a long time in one faculty which affected the whole institution. (R#9)
- It took twenty years for this institution to emerge as a real strength. (R#10)
- This institution attracted a lot of young staff in the eighties when it was building research strength. It took eight years to get projects off the ground but these are now the institution's areas of research strength. (R#10)

- The current DVC Research is involved in the area of some very entrepreneurial research in this institution. (R#11)
- The Research Management Unit is a very good unit in its support for research - it is both helpful and encouraging and presents a good research profile. (R#11)
- The current VC has crystalised a lot of hostility. Doesn't have much contact with academics and is Management/Performance profile oriented. Some feel the infrastructure/teaching thrust is being run down under this VC. (R#11)
- Morale on the campus is currently very low. I am going to take early retirement. A lot of people, if they can, will be going. You get the feeling you are just going around and around in circles and that you can't do things properly. (R#11)
- There is a lot of disillusionment at that institution. (R#9)

### **Indications of the social relations within the host institution**

- In the early days the VC virtually let the place run itself so if Centres or researchers could get external funding they were fairly independent and autonomous. (R#9)
- The institution has a tradition of active, community-oriented research, specifically in the form of leading-edge research Centres and high profile academics. (R#9)
- Beware of working in this culture - they are afraid of being unmasked and the institution has an inferiority complex that goes back to its beginnings and its relationship with the older well-established universities. (R#9)
- This is a much better environment for women than places like Sydney University. This institution has the highest proportion of staff in NSW. This gives women more opportunity. The VC doesn't have many women around her though. (R#11)
- The current VC has generated a lot of resistance and animosity with the introduction of a management culture that did not fit comfortably with the university culture which had traditionally provided a high degree of autonomy. (R#9)



- The DVC Research is caught in the middle when it comes to the managerialist culture of the VC and the Academics and their culture. (R#11)
- The DVC is a good researcher. (R#10)
- The institution has always been keen on research and there have been some top groups. This institution sometimes put excellence above relevance when it considered the research of greater intrinsic value and capable of bringing prestige to the university. (R#10)

## Appendix 8 : *Preliminary Framing of the Inquiry Question* <sup>4</sup>

**Thesis Question :** What role do leadership, management and communication patterns play in the shaping of research in higher education and in what ways do infrastructure requirements vary according to the patterns which emerge?

The rationale for leadership, management and communication patterns being the thematic concern for higher education research environments was as follows:

In terms of international competitiveness, the Australian government is seeking to utilise the full potential of its knowledge generating and innovative resources in the research enterprises of higher education. For this to occur, both participants in the research enterprise and funding authorities need to know much more about the factors which contribute to research productivity.

Rather than production units however, research enterprises are in their orientation, essentially learning enterprises. It is the leadership, management and communication practices which structure these learning contexts, which provide an environment that to a lesser or greater degree enables the generation of knowledge and innovation.

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<sup>4</sup>Journal entries 1991

### Appendix 9 : Participant Inclusion Dimensions

Well established paradigm	↔	Emerging paradigm
Established discourse	↔	Emerging discourse
Funding mechanism with large degree of Autonomy	↔	Funding mechanism with limited degree of autonomy
Mechanistic organisational structures	↔	Organic organisational structures
Leadership provided primarily by discipline imperatives	↔	Leadership provided primarily by authority and skills of individual
Established/uncontested methodology	↔	Wide range of methodological approaches from which options are negotiated
Enquiry located in primary discipline	↔	Multidisciplinary inquiry domain
Narrow band of researching capability/career stages	↔	Wide range of researching capability/career stages
Timeframe of research enterprises- short term	↔	Timeframe of research enterprises- long term
Nature of cognitive enterprise- incremental knowledge growth	↔	Nature of cognitive enterprise- innovative and generative
Resourcing primarily institutional or through higher education research system (e.g. ARC)	↔	Resourcing primarily through external/entrepreneurial activity
Established status, roles and career pathways	↔	Uncertainty and ambiguity regarding status, roles and career pathways
Low sophistication factor in inquiry instrumentation	↔	High level sophistication factor in inquiry instrumentation
Scholarship driven research activity	↔	Market driven research activity

## **APPENDIX 10 : *Project Information Booklet as Basis For Negotiating Inquiry Focus***

### **A collaborative analysis of the conditions which facilitate ongoing development of researching capability in Higher Education**

The environment of Higher Education research is changing and something is missing. The major contribution of Higher Education researching systems to the national research and development effort is the provision of conditions which facilitate growth in researching capability. These 'conditions' constitute 'best practice' criteria yet are not taken into account in the competitive funding criteria for judging research strength and research productivity.

This present research project involves direct collaboration between participants and the investigator in an analysis of conditions which support the ongoing development of researching capability. The research design is intended to assist participants in developing a clear picture of the organisational, cognitive and social conditions which they consider provide the most supportive environment for their endeavours.

The project will involve a range of different types of research groups in one University setting. It is intended that the information shared within each group will be used by group members to generate a range of possible indicators. These indicators will relate to the conditions of 'best research practice' for achieving their goals. Such indicators will be of benefit, not only to the researchers involved, but also provide a legitimate and compelling argument for better informed research funding and infrastructure provision. Their availability will ensure a complementary account of research productivity to balance the current bias towards the number and value of research grants attained as research funding criteria.

The development of relevant and useful quality assurance indicators would involve research groups in both individual and group discussions of a reflective nature. The first task, through interviews and debriefing, would be to build a descriptive account of the group's particular patterns of action related to research activity. The group would, in discussions with the researcher, develop an interpretive analysis of how they go about supporting the development of researching capability.

The researcher will, during initial discussions with the participants negotiate a range of possible methodological approaches to minimise commitment in time to the project.

### **Expected Outcomes for Participants**

The direct benefits of participation for researchers in this project will include:

- A deeper understanding of the conditions which contribute towards the quality of the learning environment for members of the group
- The development of a range of monitoring strategies to ensure ongoing development and renewal of this supportive learning environment
- The generation of information which will provide a foundation for quality feedback loops within the broader system of Higher Education research

Overall, the research program is designed to facilitate more informed decisions in relation to:

- the contribution of higher education researching systems to the realisation and renewal of creative and innovative resources
- The contribution of particular leadership, management and communication strategies for the institution and research activities concerned .

- The appropriateness of a collaborative methodology for identifying and defining infrastructure requirements for research programs within the institutional research profiles concerned
- More informed use of resources to create enabling and supportive researching systems that acknowledge universities as learning communities and ensure continual improvement in researching capability

**APPENDIX 11 : *Letter of Recommendation From DVC Research, Host Institution***

HOST INSTITUTION

20 August 1992

TO WHOM IT MAY CONCERN

This is to introduce Ms Sue Curtis from the Centre for Research Policy at the University of Wolongong.

Ms Curtis is undertaking research for her PhD on the analysis of the conditions which different leadership, management, and communication patterns provide for the development of researching capabilities. I have given her the name of your research group as one with which it might be profitable for her to interact, if you also believe that this would be of value to you. Whether or not such interaction takes place is entirely a matter for negotiation between you and Ms Curtis.

xxxxx    xxxxxx

Deputy Vice-Chancellor (Research)

## **APPENDIX 12 : *Rationale for Framing Inquiry in Terms of Quality Research Environments***

Making the invisible product visible - a framework for quality assurance in higher education

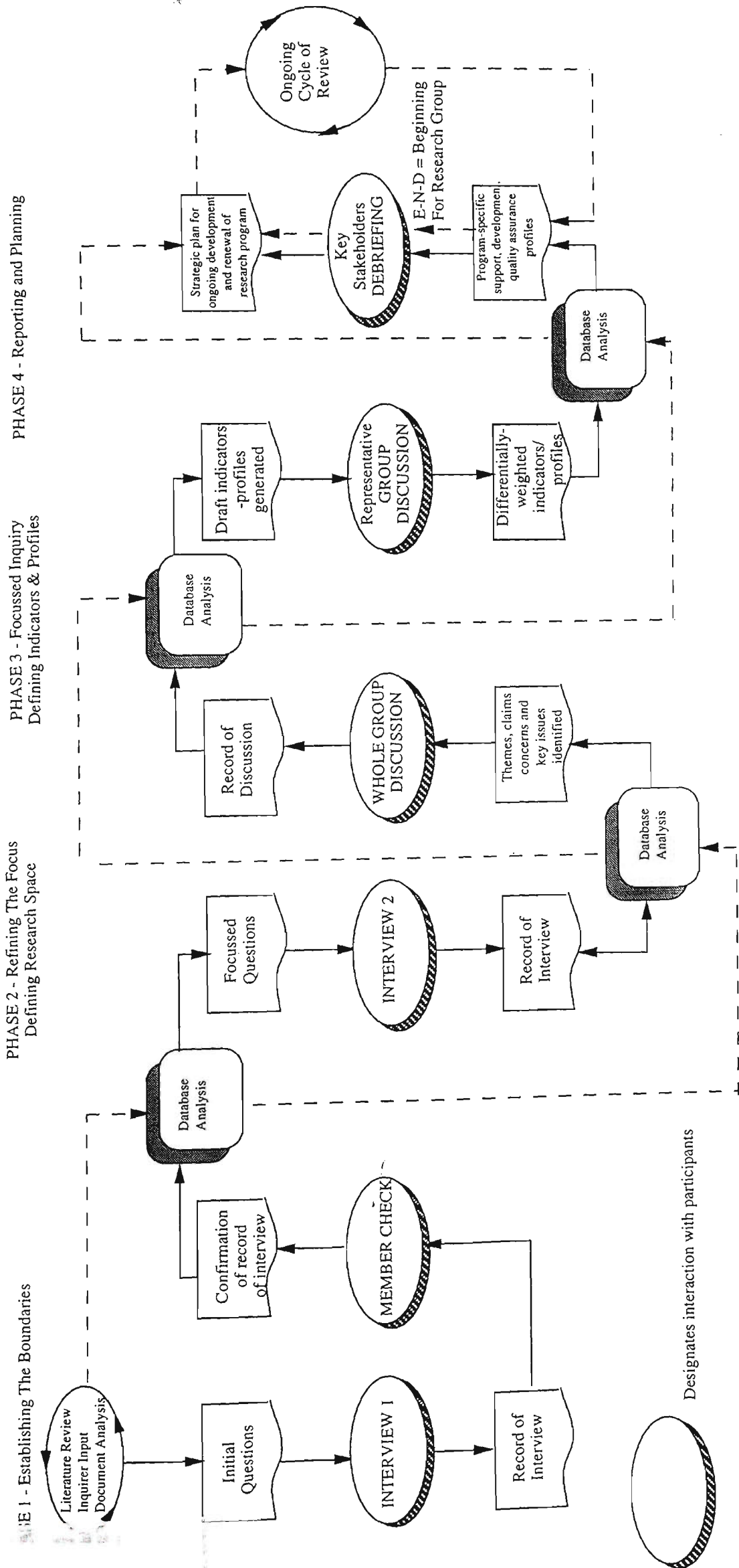
One of the key difficulties for quality assurance in higher education is that the product , 'learning,' is essentially a process and largely an invisible one at that. This invisibility is further compounded by the fact that the range of beneficiaries or customers is indeterminate. The supplier in this context, is also a customer of his or her own 'product' in that he is continually learning how to better facilitate learning. What then is to be assured in terms of 'quality' and how can quality assurance here dovetail with the traditional indicators of academic legitimacy and recognition?

Quality assurance of the learning process only makes sense in terms of the conditions which facilitate effective understanding, and as a consequence meaningful and productive action on the part of those who understand. While it is never possible to make explicit the entire 'learning' that has taken place, it is possible to illuminate the conditions which have contributed to understanding and in turn, meaningful and productive action. Understanding the conditions which facilitate effective understanding is a first step in quality assurance for organisations dedicated to learning. It is in this respect that 'best practice' in fact makes sense in higher education.





DRAFT FLOWCHART OF INQUIRY PROCESS FOR NEGOTIATION WITH PARTICIPANTS



**APPENDIX 15 : Participant Involvement in Key Activities of the Emergent Design**

Group	Group Participant	Phase 1 Interview	Phase 1 Feedback Member Check	Phase 2 Feedback Member Check	Phase 3 Member Check	Phase 3 Weighting Process	Phase 4 Project Feedback Debriefing & Quest.
1	#1	✓	✓	✓	✓	✓	×
1	#2	✓	✓	✓	✓	✓	×
1	#3	✓	✓	✓	✓	✓	✓
1	#4	✓	✓	✓	✓	✓	✓
2	#1	✓	✓	✓	✓	✓	×
2	#2	✓	✓	✓	✓	✓	✓
2	#3	✓	✓	✓	✓	✓	✓
2	#4	✓	✓	✓	✓	✓	✓
3	#1	✓	✓	✓	✓	✓	✓
3	#2	✓	✓	✓	✓	✓	×
3	#3	✓	✓	✓	✓	✓	✓
3	#4	✓	✓	✓	✓	✓	✓
3	#5	✓	✓	✓	✓	✓	×
3	#6	✓	✓	✓	✓	✓	✓
4	#1	✓	✓	✓	✓	✓	×
4	#2	✓	✓	✓	✓	✓	✓
4	#3	✓	✓	✓	×	×	×
4	#4	✓	✓	✓	✓	✓	✓
5	#1	✓	✓	✓	✓	✓	×
5	#2	✓	✓	✓	✓	✓	✓
5	#3	✓	✓	✓	✓	✓	×
5	#4	✓	✓	✓	×	×	×
5	#5	✓	✓	✓	×	×	×
5	#6	✓	✓	×	×	×	×
5	#7	✓	×	×	×	×	×

## **APPENDIX 16 : *Open-ended focus questions***

1. Could you tell me about your background and your particular area of specialised knowledge?
2. Could you tell me about how you came to be a member of this research team ?
3. Tell me about the qualities someone needs to be a good researcher in this field?  
(ways of acting in the world - methods, exemplars)
4. Tell me about the strengths you bring to the particular research activities that you are engaged in.
5. What is the nature of the research program that you are engaged in?
6. How would you support a colleague who was carrying out research in the same area that you are involved in?
7. What is different about research in this field compared to other disciplines and their approaches?
8. What are the challenges in this field of research and what are the barriers?
9. Tell me about the type of support you appreciate in meeting the challenges?
10. How does your research team go about deciding what the boundaries of the research will be and the roles and responsibilities of those involved?
11. Could you tell me about the research you are involved in:
  - What is your level of involvement?
  - How do you establish your priorities in terms of involvement?
12. If you were to draw a model of your research team - the way it functions as an organisation, what would it look like?

**APPENDIX 17 : *First Feedback Cycle - Sample Letter***

Dear xxxxxx

Please find attached my record of interview with you last week on the 27th October. In anticipation of further involvement I would appreciate if you could read through this and add, amend, delete or extend any of the recorded comments. The original information and any responses you may add will provide the framework in which we can start to build a picture of your research program.

I was particularly interested in the principles which guide your management of the research process. I would like to speak further with you regarding some of the comments you made and perhaps add to the insights that your comments have given to me.

I look forward to our next meeting at which time you can give me some feedback to the account I have attached. At this meeting I would like to negotiate with you a plan for future involvement that will minimise demands on your time but still provide for the collection of quality information.

I will call you to set a date for our next meeting.

Yours Sincerely

Sue Curtis

## **APPENDIX 18 : *The Use of Graphs for Analysis and Feedback in Qualitative Research***

A number of options were tried for graphing the profiles of Sector weightings for each participant in each of the three domains of action. Using Excel graphing capabilities, constraints, facilitation and tensions were graphed for each participant in the first group to receive their feedback using both Radar<sup>5</sup> and Column<sup>6</sup> graphs. While there were certain benefits with these options, there were also drawbacks. The benefits and drawbacks were :

1. Radar Graphs - These graphs, which represent the relative areas of constraint, facilitation and tension for each participant, were an attractive option because they were conceptually and theoretically consistent with the Web metaphor on which the original weighting grid had been designed.

The limitation of this type of graphing, however, was that a zero or very low weightings distorted the picture of the research space presented in the graph. This graph proved to be useful only in cases where there were weightings in two or more Sectors of the Domain and where the sum of the numbers was high enough to be represented as an 'area' rather than simply a line.

2. Column graphs - The relative levels of facilitation, constraint and tension for each participant in each Sector for each of the three Domains of action could be demonstrated clearly using column graphs. The benefit of column graphs was that the 'picture' did tell the story of the participant's tacit knowledge

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<sup>5</sup>Ref. Radar Graphs in Excel Manual

<sup>6</sup>Ref. Column Graphs in Excel Manual

about the value of action for research and all this information could be presented in a single graph for each of the three domains of action.

Column graphs appeared to be a very striking representation of the weightings profiles and were most appropriate at the individual level of reporting. However, when the group average was introduced, column graphs proved insufficient for the reporting task. The solution was to have three graphs for each participant for each domain, one presenting a profile of constraints, one a profile of facilitation and the other a profile of tensions. With the constraints, facilitation and tensions separated out, each of the domain profiles of weightings could be compared with the group average for that domain. In this form though, line graphs, rather than bar graphs proved to be most appropriate because the similarities and differences in profiles was clearly distinguishable in terms of patterns of significance in relation to constraints, facilitation or tensions. With column graphs, the discontinuous representation of weightings tended to distract attention from the overall pattern of constraint, facilitation or tension across Sectors, making the comparison between individual and group more difficult.

**Appendix 19 : Project Feedback Questionnaire**

**STUDY OF FACILITATING RESEARCH ENVIRONMENTS**

**QUESTIONNAIRE**

The following questions have been designed to gather baseline data which will be used for the purposes of classification of profiles. The purpose of this activity is to identify those factors which might explain differences between the conditions which facilitate different functions within a group. The data will also give some indication of factors which might be important across a range of different knowledge bases and research types. All details will remain confidential and the anonymity of participants will be guaranteed through aggregation of specific items.

Please return this Questionnaire by May 31st  
in the enclosed stamped addressed envelope.

1. (a) Respondent's name:

.....

(b) Name of research group or organisational unit:

.....



2. How long have you been employed at this institution?

☐ Less than 1 year

☐ 4-6 years

☐ 1-3 years

☐ More than 6 years (please specify)

.....

3. How long has your current research group or organisational unit been operating in this institution?

Number of years: .....

4. How long have you been a member of your current research group or organisational unit?

☐ Less than 1 year

☐ 4-6 years

☐ 1-3 years

☐ More than 6 years (please specify)

.....

5. (a) What is your highest academic qualification?

.....

(b) In what academic field was this qualification obtained ?

.....

(c) In what year was this qualification obtained?

6. What, in your opinion, is the relevance of your previous qualifications and/or experience to your current research-related role?

.....

.....

.....

.....

7. What is your academic employment classification or equivalent level of employment?

<input type="checkbox"/> Senior Executive	<input type="checkbox"/> Head of Centre
<input type="checkbox"/> Dean	<input type="checkbox"/> Senior Lecturer
<input type="checkbox"/> Faculty Head	<input type="checkbox"/> Lecturer
<input type="checkbox"/> Professor	<input type="checkbox"/> Research Assistant
<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Administrative Officer
<input type="checkbox"/> Other (please specify) .....	

8. Which categories of personnel are responsible to you in the above position? Please indicate the number of staff in each category.

	N°		N°
<input type="checkbox"/> Professor	.....	<input type="checkbox"/> Research Fellow	.....
<input type="checkbox"/> Assoc. Professor	.....	<input type="checkbox"/> Professional Officer	.....
<input type="checkbox"/> Senior Lecturer	.....	<input type="checkbox"/> Technical Officer	.....
<input type="checkbox"/> Lecturer	.....	<input type="checkbox"/> Postgraduate Student	.....
<input type="checkbox"/> Other (please specify)	.....		
	.....		

9. In your current position, what percentage of your time is spent on ...

<input type="text"/> %	Administration
<input type="text"/> %	Teaching
<input type="text"/> %	Research
<input type="text"/> %	Other (please specify)
.....	

10. How long have you been engaged in your current research-related role (position from which you weighted the comments which you made in our initial discussions)?

☐ Less than 1 year

☐ 4-6 years

☐ 1-3 years

☐ More than 6 years (please specify)

.....

11. Are you currently actively engaged in research in the research group or organisational unit identified in Question 1(b)?

Yes ☐

No ☐

If ‘Yes’, go to Question 12

If ‘No’, go to Question 18

12. Which categories of research personnel are involved in your primary research project area (as per research group or organisational unit nominated in Question 1(b) above)? Please indicate the number of staff in each category.

	N°		N°
<input type="checkbox"/> Professor	.....	<input type="checkbox"/> Research Fellow	.....
<input type="checkbox"/> Assoc. Professor	.....	<input type="checkbox"/> Professional Officer	.....
<input type="checkbox"/> Senior Lecturer	.....	<input type="checkbox"/> Technical Officer	.....
<input type="checkbox"/> Lecturer	.....	<input type="checkbox"/> Postgraduate Student	.....
<input type="checkbox"/> Other (please specify)	.....	.....	.....

**13. Do you have any collaborative partners in research from outside your institution (as per research group or organisational unit nominated in Question 1(b) above)?**

☐ No

☐ Yes (please specify institution/organisation)  
.....  
.....  
.....

**14. How long have you been involved in your current primary research project (as per research group nominated in Question 1(b) above)?**

☐ Less than 1 year

☐ 4-6 years

☐ 1-3 years

☐ Other (please specify)  
.....

**15. What is your current Field of Research activity?**

**Please refer to attached ABS Standard Research Classifications Chart on page 7 of this questionnaire and indicate the area(s) in which you are involved in your research activities. Please ensure that you circle:**

- One of the 12 sub-divisions on the attached Field of Research Chart
- One or more of the groups listed on the attached Field of Research Chart

**16. The Australian Bureau of Statistics classifies research activity types according to the following criteria. Is the type of research activity you are currently involved in (as per research group nominated in Question 1(b) above) best described as ... ?**

☐ **Pure Basic**

[Experimental and theoretical work undertaken to acquire new knowledge without looking for long term benefits other than the advancement of knowledge - ABS, 1993.]

☐ **Strategic Basic**

[Experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of useful discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems - ABS, 1993.]

☐ **Applied**

[Original work undertaken primarily to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new ways of achieving some specific and predetermined objectives - ABS, 1993.]

☐ **Experimental Development**

[Systematic work, using existing knowledge gained from research or practical experience, that is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed - ABS, 1993.]

17. Do you have primary management responsibility for the funding allocations with respect to the research you are currently engaged in?

☐ Yes      ☐ No

If 'Yes', go to Question 18

If 'No', go to Question 21

18. What is the approximate value of the research budget for this research activity?

\$

19. What are the sources of your research funding?

☐ Internal Funding (please specify)

- ☐ External Funding Sources (please specify)
- ☐ Commonwealth Government
- ☐ State & Local Government
- ☐ Business Enterprises
- ☐ Private Non-profit & other Australian
- ☐ Overseas

20. What is the approximate value of annual research funds for which you have been responsible in your area of the research program, *averaged* over the last three years?

\$

21. Would you please provide a short response to each of the following ?

(a) whether or not the FEEDBACK SUMMARY has represented, with integrity, those conditions which facilitated or constrained you in your effective research activity during the period in which our original discussions took place;

(b) the extent to which this process has deepened your understandings about the conditions and actions which facilitate your research activity; and

(c) the extent to which the understandings gained in this process stimulate and facilitate action on your behalf to improve the quality of your research environment.

.....

.....

.....

.....

.....

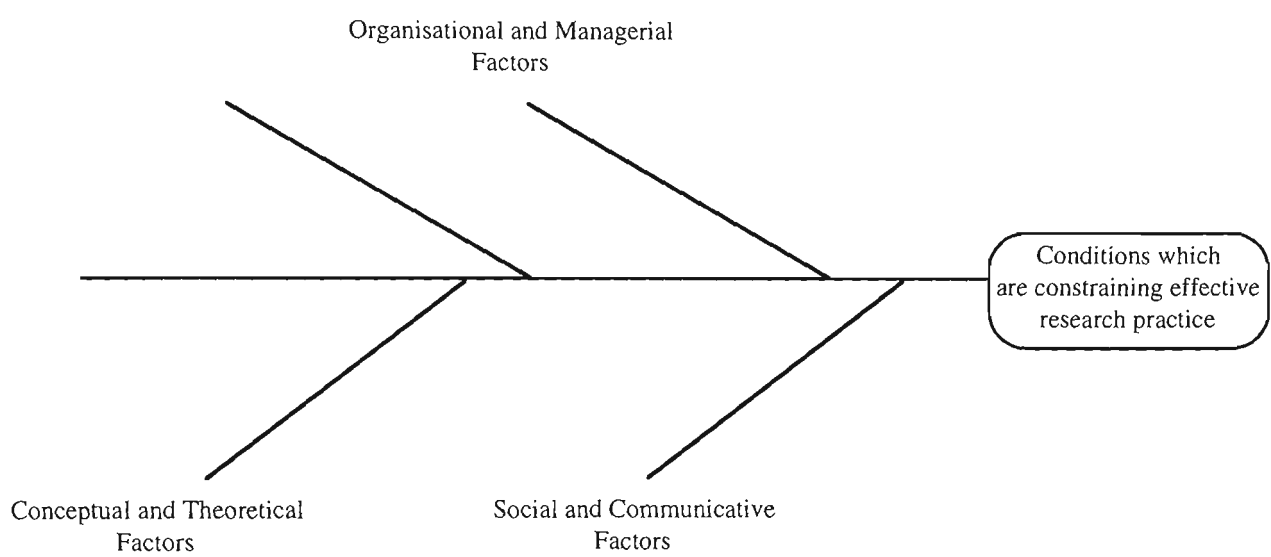
.....

*Thank you for your participation*



**APPENDIX 20 : Cause -Effect Diagram Worksheet**

**Constraints on Effective and Productive Research Practice**



**APPENDIX 21 : *Analysis and Planning Worksheet***

**Description of concern :**

- A desirable benchmark (weighting) for improvement
- An appropriate time span for this improvement to take place
- The group role to take responsibility for driving this improvement
- Strategies that might be employed to bring about such improvement
- Indicators that will demonstrate that improvement has taken place
- How this improvement will better support the group in achieving its goals

## APPENDIX 22 : Successive Drafts of Generic Categories for Action-Oriented Framework

### February 1993 Categories: Page 1

#### February '93 #2 - Coding Categories

- (1) Organisation (1.1) Context  
(1.2) Structure  
(1.3) Culture
- (2) Research Management
- (2.1) Policy (Theory-of-action)  
(2.2) Structures  
(2.2.1) research collective type  
(2.2.2) organisational type  
(2.2.3) infrastructures  
(2.2.4) systems linkages  
(2.3) Practices  
(2.3.1) decision-making  
(2.3.2) prioritising/planning  
(2.3.3) utilisation of human resources  
(2.3.4) time-frames
- (3) Leadership:  
(3.1) Policy (Theory-of-action)  
(3.2) Style  
(3.3) Practices (Theory-in-action)  
(3.4) Sources link to authority &c
- (4) Funding  
(4.1) Sources  
(4.2) Mechanisms  
(4.3) Levels  
(4.4) Infrastructure  
(4.5) Priorities
- (5) Human Resources  
(5.1) Roles and responsibilities  
(5.2) Career pathways  
(5.3) Support staff  
(5.4) Employment options  
(5.5) Full-time, casual/temporary appoints.  
(5.6) Personnel selection/appointment  
mechanisms/criteria
- (6) Communication  
(6.1) Strategies  
(6.2) Mechanisms  
(6.3) Patterns

2 2 1  
2 2 2  
2 2 3  
2 2 4

print off & put with cog. maps  
as descriptive account.

## February 1993 Categories: Page 2

- (7) Knowledge Base
- (7.1) Principal discipline areas } 400 1 1 ✓
  - (7.2) Supporting discipline areas } 400 1 1 ✓
  - (7.3) Knowledge type/function, focus of research enterprise 400 1 1 ✓
  - (7.4) Knowledge growth pattern (incremental or large step) 400 1 2 ✓
  - (7.5) Authoring of knowledge, publication strategies 400 1 3 ✓
  - (7.6) Skills and capabilities 400 1 4 ✓
  - (7.7) Theoretical, methodological framework (including discipline demands) 400 1 5 ✓
  - (7.8) Creativity + Innovation 400 1 6 ✓
  - (7.9) Resources Instrumentation
- (8) Legitimation structures
- ~~(8.1)~~ Theory-of-action
  - ~~(8.2)~~ Theory-in-action
  - ✓(8.3) Sources of authority (incl. academic)
  - (8.4) Accountability 200 4 2
  - ✓(8.5) Intellectual capital (Including identity as researcher)
  - ✓(8.6) % of independence and autonomy
- (9) Reward systems
- (9.1) Nature of available rewards } 400 1 5
  - (9.2) Access to reward and recognition
- (10) Research sophistication
- (10.1) Qualification and experience profiles 200 2
  - (10.2) Instrumentation None 400 2 1
- Thick Descrip*
- (11) Research activity
- (11.1) Constitution of activity as research
  - (11.2) Research space - cognitive map of researcher's perceived research space 200 2 7
  - (11.3) Teaching/research linkages
- (12) Spheres of Influence
- (12.1) Relationship to stakeholders (including researcher)
  - (12.2) Relationship to host institution
  - (12.3) Relationship to Govt ~~Policy~~ Government/Government bodies 200 4 1
  - (12.4) Relationship to community of scholars, international connections
  - (12.5) Relationship to market/industry
  - (12.6) Relationship to public

## February 1993 Categories: Page 3

(20)	Concerns	400	7
(21)	Issues	400	8
(22)	Positive claims	400	9
(100)	Research Management Unit		
(200)	AIDS Research Unit		
(300)	National Centre For English Language Teaching and Research		
(400)	Australian Centre For Egyptology		
(500)	Electronics Department		
(600)	Research Unit For Biodiversity & Bioresources		

23 Resorder Input.

## Categories and Provisional Definitions #1 Page 1

### ORGANISATIONAL & MANAGERIAL DOMAIN

Policy statements are those which prescribe activities acceptable and valued in this particular research environment.

Research 'practice' statements describe what happens in practice.

TOA **Sector 1 - Research management policy** <sup>2.1 2.2.1 2.2.3</sup>  
<sup>2.2 2.2.2 2.2.4</sup>  
 Policy statements regarding the organisation and management  
 for of research activity co-ordination (facilitation)

T1U **Sector 2 - Research management practices** <sup>2.3.1 2.3.3</sup>  
<sup>2.3.2 2.3.4</sup>  
 Comments which relate to what happens in practice, with the  
 organisation and management of research activities  
 (↓ facilitation)

TOA **Sector 3 - Leadership policy** <sup>3.1</sup>  
 Provision of opportunities for leadership to emerge within the  
 group

T1U **Sector 4 - Leadership practice** <sup>3.2</sup>  
<sup>3.3</sup>  
 Comments which acknowledge particular forms or styles of  
 leadership in research activities

T1U **Sector 5 - Human resources** <sup>5.1 5.3 5.5</sup>  
<sup>5.2 5.4 5.6</sup>  
 Comments about human resources requirements and  
 expectations including roles & responsibilities, career  
 pathways or options, personnel selection criteria and  
 appointments profiles.

TOA **Sector 6 - Research Funding** <sup>4.1-4.5</sup>  
 Comments related to funding sources, mechanisms, levels of  
 funding, infrastructure or funding priorities

## Categories and Provisional Definitions #1 Page 2

### CONCEPTUAL AND THEORETICAL DOMAIN

#### Sector 1 - Discipline base 7.1 7.2

Comments which define the content and boundaries of the particular knowledge base used including principal knowledge base and supporting knowledge disciplines or fields.

#### Sector 2 - Knowledge type 7.3 7.9 (10.2)

Comments related to the focus of research activity and the purposes served by advancement of knowledge in this discipline or field. (SEO's)

#### Sector 3 - Theoretical & methodological frameworks 7.1

Comments about the accepted frameworks and methods for establishing meaning, credibility, accuracy, relevance and significance, including resources and level of sophistication

#### Sector 4 - Knowledge growth patterns 7.7

Comments related to the patterns of growth in knowledge in this particular discipline or field including time-frames and magnitude of advances.

#### Sector 5 - Authoring of knowledge & publication strategies 7.5

Comments which describe the strategies employed by researchers in generating and publishing knowledge.

#### Sector 6 - Skills, capabilities & creativity 7.6 7.8

Comments related to skills & experience profiles, aptitudes, background experience and attitude to research activity.

## Categories and Provisional Definitions #1 Page 2

### SOCIAL & COMMUNICATIVE DOMAIN

#### Sector 1 - Research activity 11.1 11.2 11.3

Comments which describe the activities that count as research, the processes involved and the purposes served.

#### Sector 2 - Reward Systems 9.1 9.2

Comments which describe the nature of available rewards and access to recognition.

#### Sector 3 - Legitimation structures 8.3 8.4 8.5 8.6 10.1

Comments referring to the symbolic structures which serve researchers purposes including source of authority and expressions of what is worthwhile and valued.

*. Academic authority.*

#### Sector 4 - Communication 6.1 6.2 6.3

Comments which refer to or describe communication mechanisms, strategies, patterns, expectations and needs.

#### Sector 5 - Spheres of influence 12.1 - 12.6

Comments referring to influence which is exerted in a particular relationship or environment. This may involve the research group or unit and any of the following; the host institution, government or government bodies, the community of scholars, international networks, the market, industry or the public. Comments which refer to the influence of broader socio-economic or socio-political environments are also included.

*Power + influence. Knowledge as strategic power to influence.*



## *Sector Definitions and Weighting Explanations - FINAL*

### **Organisational & Managerial Domain of Action**

#### **Sector 1 - Research Management Policy Statement**

Research management policy statements are defined as those which represent the participant's beliefs, values and understandings about the organisation and management activities that are appropriate for research activity. These statements can be expressed as 'if - then' statements. If 'X' IS the case, then this will facilitate research. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

#### **Sector 2 - Research Management Practice Statements**

Research management practice statements describe what actually happens in the organisation and management of research. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

#### **Sector 3 - Leadership Policy Statements**

Leadership policy statements are defined as those which indicate the source of, and opportunities for, leadership to emerge within the group. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

#### **Sector 4 - Leadership Practice Statements**

Leadership practice statements are defined as those which acknowledge the forms or styles of leadership which are seen to be present in the research space. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

#### **Sector 5 - Human Resources Practices**

Human resources statements are defined as requirements and expectations in relation to human resources, including roles and responsibilities, career pathways or options available, personnel selection criteria and protocols. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

## **Sector 6 - Funding**

Statements which refer directly to funding: sources, levels, mechanisms, priorities and infrastructure are included in this sector. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

## **Conceptual and Theoretical Domain of Action**

### **Sector 1 - Discipline base statements**

Discipline base statements are defined as those which differentiate the content and boundaries of the particular research activity from other disciplines or fields of research. These are inclusive of the principle knowledge base and supporting disciplines or fields. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 2 - Knowledge Type Statements**

Knowledge type statements are defined as those which identify the relationship between the focus of the research activity and the purposes served by advancement of knowledge in the discipline or field concerned. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 3 - Theoretical & Methodological Frameworks**

Theoretical and methodological statements are those which describe accepted frameworks and methods for establishing meaning, credibility, accuracy, relevance and significance, including resources and level of (equipment) sophistication. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 4 - Knowledge Growth Patterns**

Statements about the patterns of growth in knowledge in the particular discipline or field, including time-frames and magnitude of advances are included in this sector. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 5 - Authoring of Knowledge and Publication Strategies**

Statements included in this sector describe the strategies employed by the researchers in generating and publishing knowledge. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

## **Sector 6 - Skills, Capabilities and Creativity**

Statements included in this sector are those which refer to skills, capabilities, experience profiles, aptitudes and attitudes in research activity. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

## **Social & Communicative Domain of Action**

### **Sector 1 - Research Activity**

Research activity statements are defined as those which describe the nature of activities which fall into the accepted category of 'research', including processes and related purposes. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 2 - Reward Systems**

Statements included in this sector are those which describe the nature of available rewards and access to recognition. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 3 - Legitimation Structures**

Legitimation structures are those symbolic structures which determine the source of merit and authority. Statements in this category refer to that which is considered worthwhile and therefore, valued. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 4 - Communication**

Statements in this sector refer to communication strategies, mechanisms, patterns, expectations and needs. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

### **Sector 5 - Spheres of Influence**

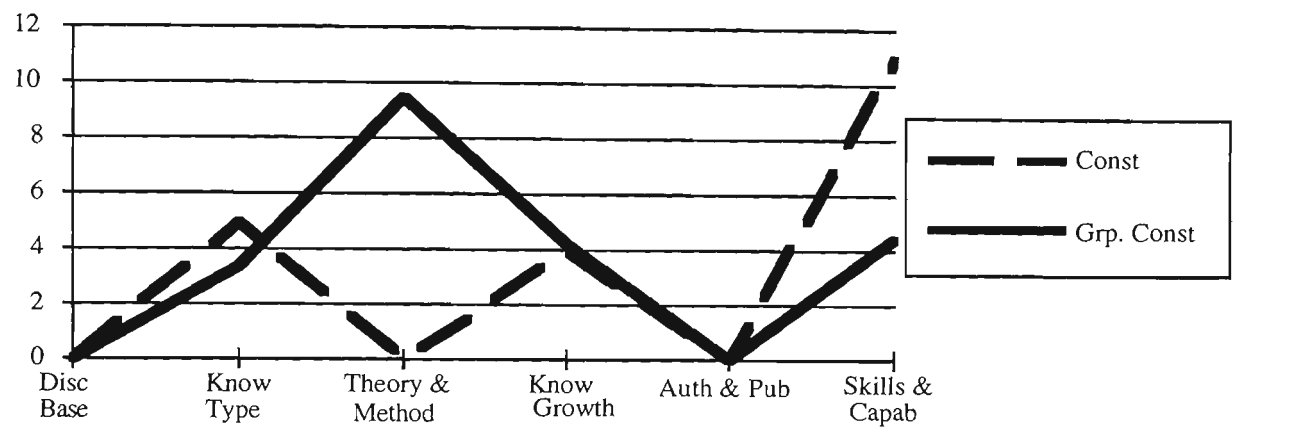
Statements placed in this sector are those which indicate levels of influence exerted in a particular relationship or environment. The direction of influence is described in terms of its source and its consequences. The level of impact on facilitation is indicated by the weighting which the participant attributes to the statement.

**APPENDIX 23 :** *Table of Participants to Whom Project Feedback Summary Booklets Were Returned*

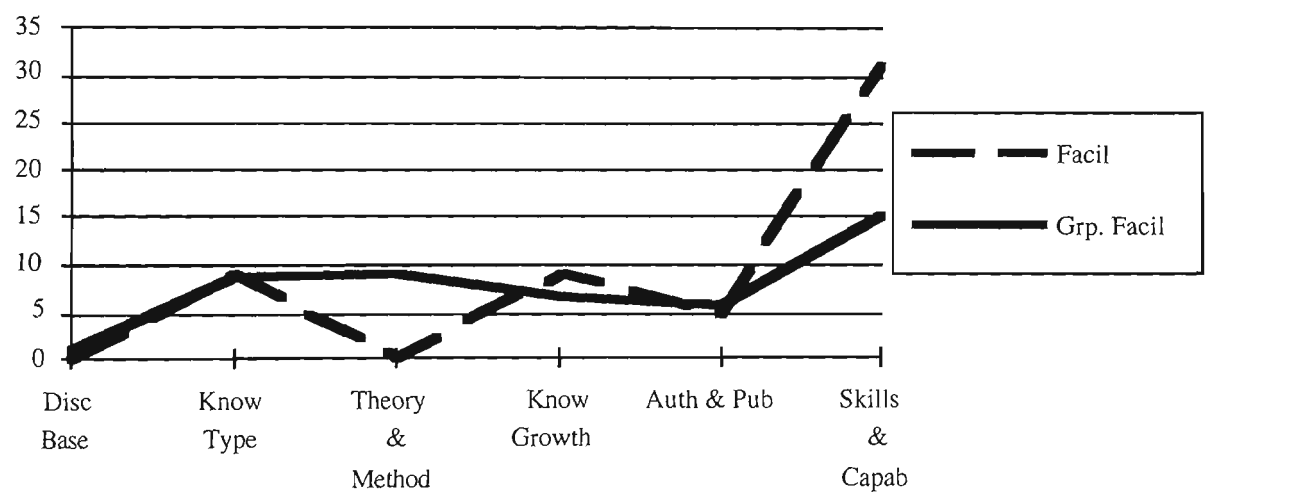
Field of Research	Group	Group Participant	Feedback Summary Booklet
Humanities	1	#1	✓
Humanities	1	#2	✓
Humanities	1	#3	✓
Humanities	1	#4	✓
Information, Computer and Communication, General Eng.	2	#1	✓
Information, Computer and Communication, General Eng.	2	#2	✓
Information, Computer and Communication, General Eng.	2	#3	✓
Information, Computer and Communication, General Eng.	2	#4	✓
Social & Med. Health Sciences	3	#1	✓
Social & Med. Health Sciences	3	#2	✓
Social & Med. Health Sciences	3	#3	✓
Social & Med. Health Sciences	3	#4	✓
Social & Med. Health Sciences	3	#5	✓
Social & Med. Health Sciences	3	#6	✓
Biological Sciences	4	#1	✓
Biological Sciences	4	#2	✓
Biological Sciences	4	#3	×
Biological Sciences	4	#4	✓
Humanities (Applied)	5	#1	✓
Humanities (Applied)	5	#2	✓
Humanities (Applied)	5	#3	✓
Humanities (Applied)	5	#4	×
Humanities (Applied)	5	#5	×
Humanities (Applied)	5	#6	×
Humanities (Applied)	5	#7	×

**APPENDIX 24 : Individual Group Comparison Weightings Profile**  
**Conceptual & Theoretical Domain Group 2 Participant-Researcher # 1**

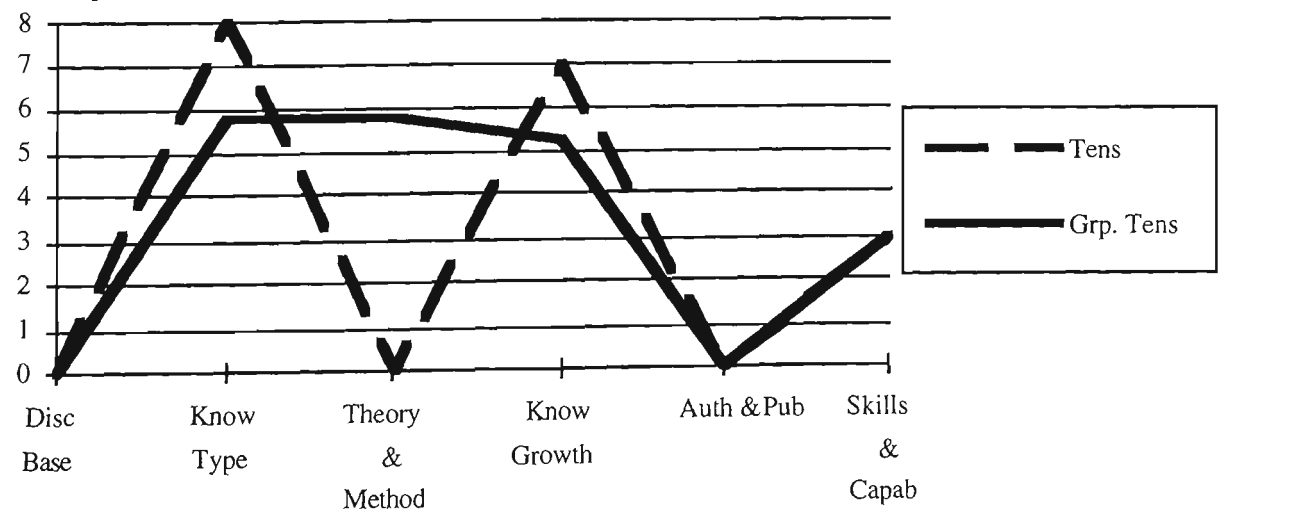
*Conceptual and Theoretical Domain, Constraining Action For Research, Group 2, Participant Researcher #1.*



*Conceptual and Theoretical Domain, Facilitating Action For Research, Group 2, Participant Researcher #1.*



*Conceptual and Theoretical Domain, Tensions in Action For Research, Group 2, Participant Researcher #1.*



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