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**THEORETICAL PARADIGMS OF
UNDERSTANDING IN ACCOUNTING:
FROM STRUCTURALISM TO PLURALISM**

A Thesis
submitted in fulfilment
of the requirements for the Degree
of
Doctor of Philosophy
at the
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ABSTRACT

Accounting thought has been largely driven by the immediate needs of accounting practitioners and hence the praxis of accounting has leaned heavily towards practice rather than theory. Resulting from this has been a loose patina of rules and conventions, frequently without articulation and frequently lacking detailed research and theorising. Two, at times overlapping, responses to this situation may be identified. One response can be described as the 'professional' or 'institutional' response, with researchers undertaking conceptual framework-type work which, although debatable, has provided little more than a political solution and has not adequately addressed the need for fundamental research and theory. The second response can be described as the development of theorising. Accounting researchers within this category in particular uplifted the scientific approach and have more recently considered alternative methods of gaining knowledge which are themselves reactions to the scientific approach.

The purpose of the thesis is to examine and criticise the principal extant theoretical paradigms of understanding in accounting with a view to offering guidance for future researchers in accounting. In doing this a phenomenological approach is used.

The thesis concludes that although there are strengths associated with the scientific approach, it is not universally appropriate nor does it confer any automatic legitimacy on the research. As a corollary, knowledge or understanding that has resulted from alternative approaches (whether they be interpretive case study or ethnomethodological research) should be included in the accounting body of knowledge. Further, by de-privileging the scien-

tific approach researchers working in alternative areas do not then need to resort to the claim that their work is 'scientific' in order to gain 'legitimacy'.

The conclusion is that a pluralistic approach would liberate accounting from the privilege accorded to scientific research. As a consequence, this would impose a more stringent requirement on the researcher and the reader to study the objectives, setting and methodology of research. Liberating accounting research from the dominance of the scientific approach means that research can be discriminated on these bases. Results can then be evaluated in their own right without one technique being privileged over another.

The importance of this conclusion is that the whole range of approaches to gaining knowledge is open to researchers - there is no prescription of one methodology or method, the positivist approach is not privileged over the ethno-methodological or *vice versa*. Consequently, a particular approach is held only as a belief statement by an individual and knowledge is recognised to be merely that which we believe it to be.

Thus the ultimate conclusion of this thesis is that we need an open exchange of views and a more empathic attitude to understanding and analysis while not being tied to particular structures nor particular rules. Hence the title, Theoretical Paradigms of Understanding in Accounting: From Structuralism to Pluralism.

ACKNOWLEDGEMENTS

In undertaking a project of this nature that spans many years, one inevitably gains feedback from many people. Rather than attempting to thank the many by name and in so doing not adequately reflect their help, I would humbly like to say a very honest thank you. To Mike Pratt and Stewart Lawrence, my University of Waikato supervisors, my most genuine thanks, for your most detailed comments and suggestions but also for the impetus mid-way through the thesis to keep going and conclude it. The only other person to whom I would like to give specific thanks is Janet, my partner without whose support and forbearance this would not have been possible.

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CHAPTER ONE

INTRODUCTION

The activities of accountants have developed over thousands of years largely as a result of practice and pressures faced by professionals in meeting users' needs, rather than as a result of research and theory development *per se*.¹ This development, which initially dealt with record keeping as a basis for fraud prevention and stewardship, and taxation, grew in sophistication as increased demands were placed upon accountants. Not surprisingly there resulted a patchwork of conceptual issues and overall, a lack of coherence and articulation between different assumptions, rules, practices and procedures. Ijiri⁽¹⁾ says,

" ... conventional accounting is a collection of many different principles and practices, which in some cases are mutually inconsistent."

Further, as these rules and procedures are the result largely of practitioners' responses to problems of practice, they provide little help and inadequate guidance when dealing with novel circumstances and particularly when adapting to and operating in a rapidly changing environment.

The result of the *ad hoc* approach to the development of accounting has been a loose patina of inherited techniques for dealing with particular situations, having little more

1. Numerous examples of high levels of skills in particular facets of accounting may be cited - in early times in the Chao Dynasty (1122-256 B.C.); in Mesopotamia (3500-2200 B.C.); in Greece (650-200 B.C.); and increasingly from the development of double entry bookkeeping through the Industrial Revolution and into the technological age of the nineteenth and twentieth centuries.

justification than that of convention.

The rate of change faced by humankind this century (notably in the 1930's following the Wall Street crash and again between the mid 1950's and the present) also placed substantial pressure upon the practices and established conventions of accounting. With little conceptualisation beyond the use of conventions to guide accountants in their activities, a move towards a better understanding of process and greater theorising was inevitable. Hence by the mid 1950's and early 1960's an increasing number of writers were calling for a sound theoretical basis to accounting.² Others called for a better matching of practice with theory as a means of improving the quality of practice. On this Imke⁽²⁾ said,

"Ideally, good accounting practice can be explained and justified by good accounting theory; but when tradition and expediency (rather than order and logic) influence the development of practice, unsound accounting practice may result."

Consequently by the mid 1960's a substantial amount of literature was emerging concerning the nature of accounting knowledge (ontology), the development of knowledge in accounting (epistemology), and the use of scientific³ and

2. Note particularly the work of Chambers (January 1955, October 1955, August 1961) and Mattessich (1957-1958). It should be noted that some earlier writers (in particular Paton, 1922) had made similar calls, but these were rare and at the time seemed to go largely unheeded.

3. The term 'scientific approach' is used here, in place of the more common term 'scientific method', to refer to methods and approaches (plural) that have their origin typically in the natural sciences. Due to the indeterminacy of the term scientific method, although apparently referring to a particular method, I have used the term scientific approach. The key elements of a scientific approach are: empiricism, rationality, causality, and a

other approaches to assist in knowledge gathering (methodology).

The thesis thus concerns itself with the justification for the application of the scientific approach in accounting, and then considers the justification for other particular methodologies and methods for knowledge gathering in accounting.

The application of the scientific approach to accounting is addressed in the early part of this thesis, in particular, the use of the received view and falsification starting in the late 1950's. The thesis then considers the application to accounting of alternative perspectives specifically the utilisation of the weltanschauung during the 1960's and 1970's through to the postmodern⁴ in more recent times.

Purpose of the Thesis

The purpose of the thesis is to examine and criticise the principal extant theoretical paradigms of understanding in accounting with a view to offering guidance for future researchers in accounting.

Background to the Study

The problems experienced in the practice of accounting,

...Continued...

belief in concrete reality. These concepts as well as others are explored later. Note also that later in the thesis, classificatory phrases such as 'the interpretivist', 'the critical theorist' and 'the hermeneutic analyst' are used to encompass a number of views again within a school or group that holds to many shared commitments, although in detail there may be strongly held differences.

4. Postmodern is used here to denote that which is not of the modern and is seen to encompass works critical of the modern and alternatives.

that were brought to a head by the Great Depression and to which substantial effort was directed by both practitioners and academics, engendered two general categories of responses. The first can be described as professional or institutional, being a response dominated by accountants in and close to practice, and largely concerned the definition of terminology, procedures and structures that were relevant to the immediate needs of the practitioner. The second response was to seek theoretic and methodological consistency from which practice with more logic and articulation could be derived. This response was more common among academic accountants.

During the 1950's and 1960's in particular, a widespread call for a rigorous development of theory for accounting is evident.⁵ As a consequence many looked outside the accounting discipline in the search for methodologies that had apparently been successful in other fields of study. Areas that involved scientific undertaking appear to have held the greatest attraction, probably due to the perceived high status accorded the natural sciences. Thus over the last thirty years, substantial effort by those working in the accounting theory area was directed at uplifting methodologies of science and more recently alternative approaches and utilising them in developing a theoretical base for accounting.⁶

5. See the numerous contributions of Chambers, R.J. as well as Dopuch, N. and Revsine, L. (ed) *Accounting Research 1960-1970: A Critical Evaluation*. Monograph No. 7, Centre for International Education and Research in Accounting, University of Illinois, 1973.

6. The number of papers on research methodology in major accounting journals, including references to the work of Popper and Kuhn, and more recently, introductory coverage of such issues in advanced accounting theory texts, support this contention. For example, the papers by Wells, M.C. (A Revolution in Accounting Thought? *The Accounting Review* v. 51(3), 1976, p. 471-482), Watts, R.L. and Zim-

The attempt to infuse a discipline with research techniques and methods from outside its own domain is not unique to accounting, and parallel efforts can be seen in economics, psychology and sociology.⁷ Furthermore, such moves appear to reflect the more general persuasion that science and technology are the cornerstones of progress and enlightenment. In fact, what accountants have done is to turn to the philosophy of science and borrow, with little consideration⁽³⁾, approaches that were already under substantial questioning, notably the approach of the received view.^{8,9} One might even suggest that some researchers in accounting have attempted to define accounting subject to the constraints of methodology rather than via ontological bases, as a clone of the natural sciences. It is this predilection with the scientific approach, and the alternatives and counter-arguments that have been

...Continued...

merman, J.L. (Towards a Positive Theory of the Determination of Accounting Standards *The Accounting Review* v. 53(1), 1978, p. 112-134) and Chua, W. F. (Radical Developments in Accounting Thought *The Accounting Review*, v. 61(4), 1986, p. 601-632). And further the texts by Matthews, M.R. and Perera, M.H.B. (*Accounting Theory and Development*. Thomas Nelson, Australia, 1991) and Hodgson, A. et al (Hodgson, A., Holmes, S. and Kam, V. *Accounting Theory*. John Wiley and Sons, Australia, 1992).

7. Many references are available to substantiate this point. However a more critical work that concerns the application of the natural science model in organisational behaviour is discussed by Behling, O. The Case for the Natural Science Model for Research in Organisational Behaviour and Organisation Theory. *Academy of Management Review* v. 5(4), 1980, p. 483-490.

8. Refer Suppe, F. *The Structure of Scientific Theories*. University of Illinois Press, 1974, for a discussion on the demise of logical positivism and the received view.

9. The received view is defined in Suppe, F. (ibid. p. 6-61) but in short is derived from the work of the Vienna Circle and logical positivism and has as its key element verification grounded in observation or experience.

spawned, which has fascinated me. In short, I see strengths in the scientific approach as well as in the sociological and postmodern approaches and hence my conclusion is that the only methodology that can be advocated is that *anything goes* within a pluralistic perspective. However, in the conclusion, I offer some means for liberating accountants from both the structuralist and monomethodological traps.

Thesis Outline

This thesis examines how the scientific approach has been applied in accounting and concludes by presenting an alternative view, that of pluralism.¹⁰ The analysis considers:

- the scientific approaches, including traditional criticisms of the approaches, irrespective of the manner in which they have been applied to accounting;

and

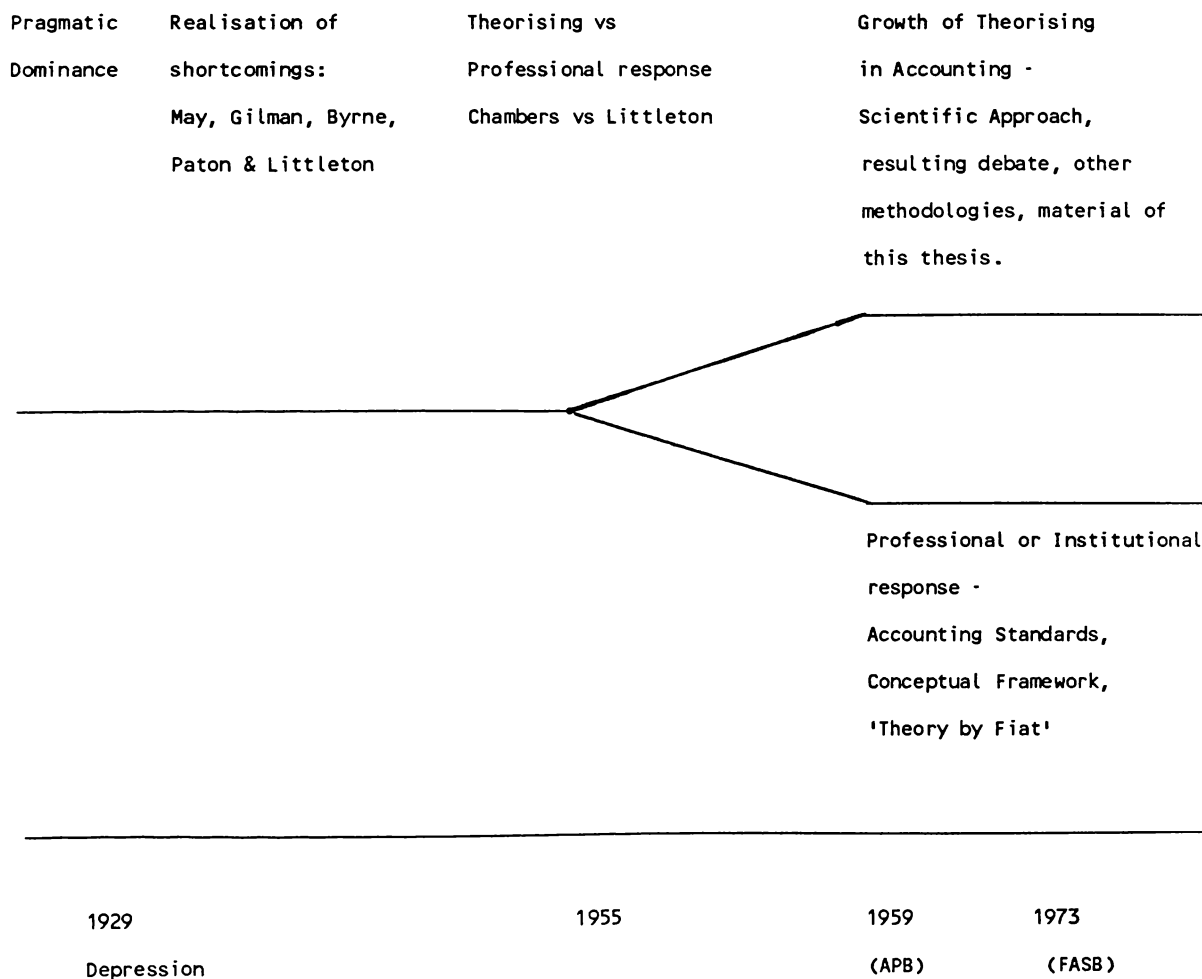
- the weltanschauungen writers, then hermeneutic and critical works and finally the postmodern work of Feyerabend and Lyotard.

To view these issues it is necessary to consider the background against which writers have worked. In particular it is important to visit the nature of theorising in both accounting and science and the relationship between

10. Pluralism is used here in a similar sense to that which Feyerabend uses it in his work *Against Method* - as a supportive and positive state and not a destructive one. It may also be likened to Debussy's maxim of "discipline with freedom" as well as having many of the attributes of Dadaism - doing as one wishes while at the same time encouraging others in their experimentation and enlightenment. Pluralism in this thesis means that there can be different theories about the derivation of knowledge that can legitimately stand alongside each other. Issues arising from this are dealt with in Chapters Eight and Nine.

them. This will be covered in Chapter Two.

The subsequent chapters broadly trace two approaches to conceptualisation in accounting, which resulted from the overly pragmatic nature of accounting through to the 1950's - the institutional responses and theoretical responses. Chapter Three briefly considers the institutional responses, and Chapters Four to Eight (the core of the thesis) consider the more theoretical approaches characterised by the use of the scientific approach and its subsequent critique. These two perspectives and their origins are shown schematically below.



More specifically, Chapter Three covers the institutional or professional response to problems in accounting practice as well as discussing the shortcomings of a largely practice derived theory. This sets the scene for the thesis, being the application of scientific methodologies in accounting.

Chapters Four to Eight proceed in a largely chronological fashion tracing the application of scientific methodology, from the mechanistic approaches of the Vienna Circle through the ideas of Popper, Kuhn, critical theorists and finally Feyerabend.

Chapter Four considers the scientific approach in its own right and as applied in accounting. This discussion considers the work of Popper as well as the principal arguments propounded by Watts and Zimmerman. The work of Watts and Zimmerman has attracted a significant following with the positivist approach having a profound impact on accounting at the current time. The work of Watts and Zimmerman also draws together and highlights most of the principal issues of the scientific approaches.

Chapter Five considers the historical and humanistic approaches and particularly the early weltanschauung perspective (exemplified by Thomas Kuhn) whereby accounting writers more frequently recognised explicitly the social context of the discipline.

Chapter Six analyses the interpretive approach of the hermeneutic¹¹ analyst and in particular the position of Gadamer. This consideration sets the scene for a discus-

11. Hermeneutics is used in the derived or secondary sense of the interpretation and investigation of human behaviour with the emphasis being upon language analysis and the belief that human action is intentional.

sion of the critical approach.

Chapter Seven discusses critical theory with particular emphasis on the views of the Frankfurt School since these are at present receiving attention in the accounting literature.

Chapter Eight carries forward the ideas from the three preceding chapters into a postmodern perspective and presents arguments for an *anything goes* approach and pluralism.

Chapter Nine draws the thesis to a close and addresses the question of 'where to now?' Are accountants left without any direction at all, in a state of confused simultaneous everything and nothing, or can positive guidance and recommendations for knowledge gathering be made within, what I suggest should be, a supportive world of empathic pluralism.

Methodology

It is normal in a thesis to discuss in detail ontological issues, the methodology employed, as well as alternative methodologies considered but rejected. However the conclusion of this thesis, that pluralism is the only principle that we might adhere to (to call it a methodology is too bold and connotes structure where the advocacy is in the antithesis), poses a conundrum for the writer in this regard since any methodology would be, at least in part, arbitrary.

An historico-phenomenological approach has been adopted whereby the competing positions and arguments concerning the different methodologies can be discussed and examined contextually. This allows the author to tell the story of the application of scientific and other approaches in

accounting, moving through to a pluralistic conclusion and allowing the different views (their strengths and weaknesses) to 'speak for themselves'. Although phenomenology has diverse meanings, it is used here to cover the core elements⁽⁴⁾,⁽⁵⁾, namely that knowledge and insight can be gained by observation and reflection, secondly that the observed must be elevated to be primary in any analysis over the observer, thirdly that subjective consciousness is key to understanding and that along with this, consciousness is seen as active and as bestowing meaning. This does not mean that the observer/analyst becomes neutral, but rather that in a phenomenological study s/he gives every opportunity for the observed to be fairly reflected, and attempts to understand the various positions by reflection rather than by a privileged set of evaluative criteria.

Parameters of the Thesis

This thesis is positioned primarily in the area of accounting although aspects of the philosophy of science and general philosophy are included. It is selective in examples chosen and concentrates on methodologies rather than writers. Material has been selected to be representative in the area under discussion, but there is no attempt to provide an exhaustive coverage of each area, since this is not the purpose of this dissertation.

The consideration of the application of scientific and other approaches to accounting requires a commentary on the application of rigorous thought to accounting and consequently raises for consideration notions such as truth, proof and reality. Such issues are substantial fields of study in their own right and are only alluded to in the present work.

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CHAPTER TWO

THEORISING IN ACCOUNTING AND SCIENCE

Introduction

In order to consider the application of scientific approaches to accounting it is necessary first to consider the nature of theorising in accounting and science. To cover these issues this chapter has been divided into a number of sections. Initially there is a brief coverage of changes facing accountants, both in practice and in academia. This is followed by three sections concerning theorising and theory, namely:

- theorising in accounting;
- the development of theory in accounting; and
- the place of theory in accounting.

A discussion of the scientific approach, the constituents of scientific endeavour and the setting of research, and understanding versus prediction follow. The chapter is brought together with a discussion of whether the scientific method can be applied to accounting.

Accounting Theory Genesis

The practice of accounting has been developed almost entirely by practising accountants responding to the day by day pressures and needs faced when carrying out their job and appears to have been little impacted by academicians or researchers.⁽¹⁾ Practising accountants have had to serve business-persons' requirements of stewardship, they have been required to comply with legislation, and the accountants themselves have had to derive standards of practice for the maintenance of some degree of discipline and consistency.⁽²⁾

The growth of accounting practice can be evidenced in the formulation of the double entry system in the Middle Ages,

the elaboration of accounting practice and rules following the Industrial Revolution (and the subsequent Bankruptcy and Company Acts in the United Kingdom) and more particularly in the widespread introduction of income based taxation legislation in the first half of the twentieth century. From the early 1900's, accountants tended to concentrate on approach, procedure and method, becoming inward-looking concerning the role of accounting and the way in which accounting practice evolved. More specifically, accountants tended to look at what other accountants did and appeared to give little consideration to wider community issues.¹

The increasing complexity of the business environment in the 1950's, which gathered pace through the 1960's, is only recently being reacted to by accountants. The period of the 1950's and 1960's was a watershed between the bookkeeping, conventions based practice on one hand, and the analytical, broader based societal/business function of more recent times. Responses such as the moves toward inflation accounting, the call for greater accountability, corporate social responsibility accounting, the call for the efficient use of resources, the consideration of externalities, and the realisation of the importance of the social as well as the legal and political environments, are only now gaining widespread acceptance within the community of accountants particularly in Anglo-American countries.

There is now a growing awareness amongst accountants that

1. For example, the works of Paton, W.A. and Littleton, A.C. (*An Introduction to Corporate Accounting Standards*. Monograph No 3, American Accounting Association, Ann Arbor, 1940) and Sanders, T.H., Hatfield, H.R. and Moore, U. (*A Statement of Accounting Principles*. American Institute of Accountants, New York, 1938) were largely descriptive of what other accountants did.

they are part of a wider social context⁽³⁾, and are shaped by and subject to parameters of society - the practice of accounting does not exist *in vacuo* as an explicit discipline dealing solely with particular monetary factors and the reporting of these. These changes can be evidenced at both the practice and academic levels.

Accountants in practice are now dealing with a much wider sphere of activity than even twenty years ago, which means that more is required from the knowledge and procedures available to accountants. The work of public accountants now ranges from the traditional accounts preparation and tax return completion, to diverse consulting activities, some of which may not easily be seen as accounting. For example, the New Zealand Society of Accountants is presently grappling with the issue of special interest groups and different classes of membership to reflect the growing diversity of activities. Overseas it is common to find several professional accounting bodies representing diverse interest groups² and the diversity of these is almost bound to increase as the range of activities undertaken by accountants also expands.

At an academic level, evidence of the unfolding of a more liberal view of accounting which accepts the interaction between society and accounting, is found in publications such as *Accounting, Organisations and Society*, *Journal of Accounting, Auditing and Accountability*, and *Critical Perspectives on Accounting*, and the work of writers such as Burchell *et al*⁽⁴⁾, Solomons⁽⁵⁾, Gerboth⁽⁶⁾,⁽⁷⁾ and

2. For example, the Institute of Chartered Accountants in England and Wales; Scotland; and Ireland, and the Chartered Association of Certified Accountants representing accountants in practice legally allowed to conduct audits, and also the Chartered Institute of Management Accountants and the Chartered Institute of Public Finance and Accountancy.

Gambling⁽⁸⁾. The general area of standard setting can also be evidenced as adopting a much wider perspective than just the technical.⁽⁹⁾,⁽¹⁰⁾

With the increasing recognition of the nexus between accounting and society came a less restrictive consideration of key issues and concepts. For example, there has been a broadening of the consideration of organisational performance and income and its reporting (particularly at the intra-organisational level), such that this now includes wider social and ethical considerations.³ The concepts of reporting and income are chosen to illustrate this point since they are central to the activities of accountants.

One of the early accounting writers to adopt a more liberal conceptualisation of income was Prince.⁽¹¹⁾ He attempted to incorporate within the notion of income many non-quantitative and social factors as well as externalities. Prince accepted that the long run goal of a business enterprise was profit maximisation, yet he added to this several factors to extend the dimension of profit maximisation, such that it better reflected the setting of the firm within society. He argued that⁽¹²⁾,

"one of the basic concepts of pragmatism is the interaction of the organism and its environment ...

Thus enquiries were made into the following areas; economic theory - both the deductive and empirical studies - biology, psychology, sociology, anthropology and management science - decision theory, administrative theory, communication theory, motivational research, and operations research."

3. Refer to Institute of Chartered Accountants of Scotland, *Making Corporate Reports Valuable*. Edited by P.N. McMonnies. Kogan Page Ltd, London, 1988.

As a result of his work he deduced that the traditional income figure was inappropriate and sadly lacking in coverage and that a large number of adjustments were necessary for a better approximation of actual business income within the social setting. He recommended that a more methodical and in-depth analysis of behavioural and environmental factors should be undertaken. Prince⁽¹³⁾ went on to say that the role of an accountant should be to consider,

"every element in the environmental setting that the accountant acknowledges as existing ... In other words, an attempt is made by the accountant to reflect all the activity that would result if the business enterprise could directly respond to the pure long term motivational model."

This view is clearly moving towards an economic and social, rather than a financial, definition of income and one which endeavours to measure the utility that flows to and from a particular grouping of people (an organisation) as a result of their interaction with society at large.

Clearly major problems exist in terms of the measurement and definition of parameters as well as the issue of double accounting.⁴ However Prince's work is of consequence as it can be considered a watershed between the old approach emphasising conventions and bookkeeping matters and the new emphasis on the expanded role and context of accounting. Although his work was a milestone in acknowledging the view of the enlarged role of the organisation, it was not immediately followed up in any significant

4. Double accounting takes place when the same economic event is accounted for in the same way by two or more entities. This can particularly be a problem when dealing with externalities, which by definition do not clearly attach to a particular entity.

fashion. One can speculate on the reasons for this lack of impact. At the time the eagerness to apply the scientific approach emphasising quantifiable factors over those of a more qualitative nature may have contributed. Furthermore, since Prince's material did not lend itself to practical extensions, perhaps it was not seen as fertile ground for research that would lead to publication.⁵

By comparison, in the area of the philosophy of science at this time, Feyerabend⁽¹⁴⁾ and Kuhn⁽¹⁵⁾ were formulating their theses on the expanded role and impact of science, including the impact of society and social systems upon scientific methodology. While in accounting the work of Prince and others was in its infancy, in the philosophy of science a wider view of knowledge had effectively overthrown that of the traditional positivist.⁽¹⁶⁾

Finally, the accounting profession is being subjected to increasing scrutiny by the public, including politicians and policy makers. The calls for greater conceptualisation by accountants when dealing with issues and the greater recognition of the broader ramifications of accounting actions may be given as two underlying reasons for the demise of the Accounting Principles Board and the emergence of the Financial Accounting Standards Board in the United States. The tasks required of accountants are increasing both in magnitude and scope, yet at the same time many of the old orders and structures that formerly provided stability and consistency in the profession have

5. A similar argument has been advanced by Watts, R.L. and Zimmerman, J.L. in *The Demand for and Supply of Accounting Theories: The Market for Excuses*. *The Accounting Review* v. 54(2), 1979, p. 273-305. They hold that research that leads to funding and publication will be pursued over research that might be carried out for its own sake, thus a resource-reward based research environment will dominate.

been called into question.⁽¹⁷⁾ The profession is left in a period of change, having many established procedures no longer serving the needs of accountants and few, if any, new procedures replacing the old.⁽¹⁸⁾

One response to these issues has been legislative via the establishment of legally enforceable standards (Canada) and/or legally empowered bodies (United States), although in many countries the determination of standards has been left to the members of the profession.

The more academic response has been substantial growth in research and a search for more theoretic underpinnings. The need for justification, conceptual integrity, and knowledge in accounting is therefore becoming increasingly important and these pressures have contributed to the resort to scientific methodologies.

Theorising in Accounting

While to some it may be obvious why theorising is an essential element of the accounting discipline, it is appropriate that a clear statement as to the importance and place of theorising in accounting is made. The American Accounting Association⁽¹⁹⁾ stated that theorising helps in,

"explaining and guiding the accountant's action in identifying, measuring and communicating economic information".

This definition is essentially a practice-oriented definition, in other words, theory is seen as providing the background, the logic, and guidance for the practice of accounting. Undoubtedly this is a relevant role for accounting theory but there is also a need for the consideration of theoretical issues in their own right if the process of knowledge gathering is to be better understood and if the evaluative criteria that might be applied

within the discipline are to be refined further. One may also contend that there is a need for the discussion of logic, methodology and concepts concerning any area, for to argue against such debate, is to argue against the place of thought, inquiry and critical analysis in a discipline. Essentially then, theories are needed in order to understand why a particular practice has taken place, to judge the validity of a particular practice in a particular set of circumstances and, from a normative point of view, to prescribe particular practice. At the same time, the process of theorising requires the setting of parameters resulting in the elucidation of assumption both in the reasoning process and in the topic under consideration.

Thus theorising may be seen to have three goals, firstly explanatory, secondly, judgemental and thirdly, predictive.⁶ A parallel can be drawn between these goals and the two most fundamental processes in theorising, that of inductive and deductive reasoning.

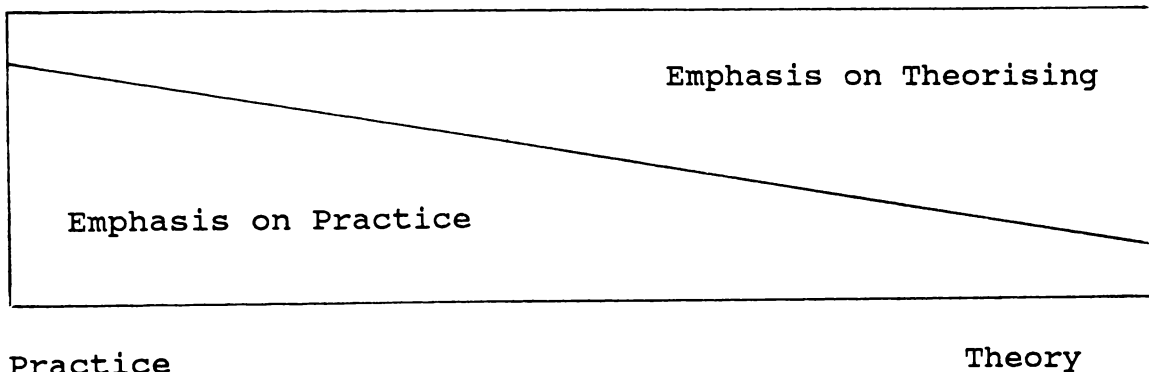
Inductive reasoning may be seen as the bringing together of large numbers of observations into a specific set of principles or theory, whereas the deductive may be seen as the prediction of particular outcomes given certain circumstances. Thus induction can be characterised as dealing with what is, while the deductive approach is predictive and often normative. Note however that the deductive approach does not require any statement about

6. Many views on the value of theory have been expressed. One early accounting example is that of Baladouni who offers three commonly held attributes that emerge from theory, these are that theory leads to "(1) economy of thought; (2) guide for the selection and study of crucial problems; and (3) guide for systematic and cumulative research." (Baladouni, V. *The Accounting Perspective Reexamined*. *The Accounting Review* v. 61(2), 1966, p. 217.)

the derivation of the particular theory. Deductive research would, however, normally be expected to include detail about predictive application, circumstances and criteria under which the prediction would hold true.

Any expression involves conceptualisation and then enunciation - to conceptualise, one must think, one must deal with concepts which will be based largely (if not totally) on experience and perception. Theory and practice should not be seen as mutually exclusive but as part of a whole and supporting each other, the result being praxis. Their relationship may be characterised as below:

The Praxis of Accounting



Certain tasks will involve a greater emphasis on one aspect than the other, but no task will be without either element. On the relationship between theory and practice, Chambers⁽²⁰⁾ said,

"..... theory is not synonymous with remoteness from reality. It is, in fact, one of the great pleasures to the theorist to put his [her] hypothesis to the test of reality to secure that no unreal or unjustifiable assumptions lie beneath the argument."

Chambers is arguing that practice and theory are closely

related and that, in accounting at least, the real measure of theory or hypothesis is in testing and evaluation against observables. This view is supported by Funk⁽²¹⁾, who says,

"The best theorists are not only willing to admit, also they contend, that theory and practice are not in opposition one to another. I think that the same might be said for the best practitioners."

Yet it was not until the late 1950's that theorising and a move beyond practice-based issues became more acceptable. It was only in the late 1950's that a major debate took place between Littleton and Chambers on the appropriate level of theorising and the extent to which accountants should concern themselves not only with issues of practice but also with issues of theory. In this argument Chambers⁽²²⁾ said,

"We judge the rejection of theorising as abstractive, impractical and unnecessary to be pernicious on several grounds. Firstly, abstraction is inevitable ... to abstract is an eminently practical way of facing complexity, to condemn theorising is to reject the value of giving thought, to deny that the discovery of orderliness, relation and consistency among the uniqueness and diversity of things experienced is of any use in the world of affairs. Few would overtly make such a denial."

In 1965 Chambers was still arguing the place of theorising in accounting and being published for so doing, demonstrating that just twenty-five years ago a case for greater theorising needed to be made. Today perhaps the same strength of argument does not need to be made. However there still exists tension between the practising accountant concerned with how to do the job required of him/her and the academic concerned more with process and explanation, pressure to publish, and debate concerning theoretic

approaches.⁷

The Development of Theory in Accounting

Through to the early 1960's, theorising in accounting was largely restricted to dealing with issues of immediate concern to practitioners and the practice of accounting.⁸ Theorising was very much the poor relation to practice and was largely explanatory and did not confront wider issues. This is most clearly seen in the work of a number of committees and individual writers following the Wall St. Depression (1929) in their attempts to codify and better define accounting practice. It was only in the 1960's and 1970's that theorising became accepted as legitimate and necessary in accounting. This latter period saw the extensive normative development by writers such as Chambers, Sterling, Mattessich et al. On the nature of accounting theory Imke⁽²³⁾ summed up the historical position when he said,

"traditionally, accounting theory has been developed to support and unify accounting practice: theory has provided the explanation for accounting practice being what it is

Accounting practice has evolved to meet the needs of society as accountants have devised techniques and methods for performance of the tasks at hand. For this reason, accounting practice has been greatly influenced by tradition and expediency. Accountants have frequently relied on trial and error as a means of improving accounting practice. Certainly theory has not been ignored;

7. The positivism debate through the 1980's and continuing in the present may be cited as evidence.

8. Imke provides a representative account of the relationship between practice and theory, and of the history of theory development. (Imke, F.J. Relationships in Accounting Theory. *The Accounting Review* v. 41(2), 1966, p. 318-322.)

nor has it been regarded as subordinate to practice. Nevertheless, the primary purpose of theory has been to serve practice with the result that practice has sometimes developed in advance of and without due consideration for good accounting theory.

Ideally, good accounting practice can be explained and justified by good accounting theory; but when tradition and expediency (rather than order and logic) influence the development of practice, unsound accounting practice may result."

Ideally, theory should develop at least hand-in-hand with current practice and should be at the vanguard of new developments. However, in the past, the development of practice *per se* appears to have been the primary driver of knowledge gathering in accounting, rather than any attempt to deal with wider and fundamental issues.⁽²⁴⁾ However, this interpretation does not convey the whole picture. While advances in the practice of accounting have frequently resulted from the work of leading practitioners and senior members of the profession dealing with particular problems and devising new methods, this does not mean that these practitioners were without theoretic perspective. Although theoretic considerations for their own sake may not have been uppermost in their minds, the very act of dealing with novel situations and coming up with solutions required conceptualisation and theorising. Thus until recently the development of knowledge has predominantly grown from the work of the practitioner rather than from the theoretician. It is only in more recent times that substantial effort by academics and practitioners working primarily in the area of theorising, has resulted in explanations and models of behaviour that go beyond the

practitioner-derived theory.⁹ However, much of the accounting theorists' work has been descriptive¹⁰ and typically their normative work has not been specified in falsifiable or even testable form, taking on therefore an essentially speculative characteristic. This may typify early attempts by any group of individuals to define a more theoretic basis for their discipline.

The Place of Theory in Accounting

The question of the place of theory in accounting may be addressed. There are several criteria by which accounting theory may be judged,

- (a) the extent to which it provides guidelines enabling practitioners to deal with new and novel practical situations;
- (b) the extent to which theory provides a yardstick for evaluating practice;
- (c) the ability of accounting theory to explain the actions of accountants when viewed from an historical perspective;
- (d) accounting theory should provide the discipline with a legitimacy and level of regard,

9. Two particularly important examples are that of agency theory (refer to Jensen, M.C. and Mekling, W.H. Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics* v. 3, October 1976, p. 305-360) and the efficient market hypothesis (refer to Fama, E.F. Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance*, May 1970, p. 383-417, for particularly good coverage).

10. For example, most of management accounting theory is derived from observation of the actions of practising management accountants. Similarly, much of the earlier work in finance concerning stock performance and the efficient market hypothesis was based on description and analysis of what was, rather than being derived from theory construction. (Refer Black, F. and Scholes, M. The Pricing of Options and Corporate Liabilities. *Journal of Political Economy* May-June 1973, p. 637-654).

such that users of accounting information accord the accountant a high degree of authority, gaining for themselves greater security as to the quality of the accounting information. This objective is rarely acknowledged by those working in the field of theory construction. It conveys the social-political requirement of accounting theory and underpins the user-oriented role of accounting.

(e) theory should enable a choice to be made between alternative explanations or hypotheses so that the theorist and researcher can better discriminate between methodologies, methods, conjecture, or merely hunch.

(f) theory should enable a better understanding of the power/domination and alienation implications of both the individual actions of accountants' and the actions of the system of which they are part.

(g) the way in which theory helps liberate people from existing mind-sets (gestalts) and provides a critical and dialectic focus for the individual and the group.

The relative importance of these criteria will differ depending upon the issue under consideration and the viewpoints of the people concerned. It is significant that theorising may be judged according to several criteria. This reflects the multiplicity of views and needs within society of which accountants are a part.¹¹

At this stage it is appropriate to record the view that

11. This also backgrounds my reason for choosing a phenomenological approach that looks at science and subsequent developments in the search for understanding, in their own right.

theory is not an esoteric concept studied by way of monastic academic pursuit, but it is an essential part of a balanced and mature discipline whereby the progression of theory and practice go hand-in-hand in an indivisible process of thinking and practice.

In summary then, developments in practice have primarily originated from practitioners yet this does not obviate the need for greater emphasis on theory development; theorising in accounting has only been seriously discussed over the last thirty years or so.

Scientific Approach and Accounting

Consideration of accounting theory literature shows a wide variety of influence drawn from numerous other disciplines including economics, sociology, philosophy, physics. This agglomeration of sources results partly from the random exploration by researchers in their quest for a more rigorous and theoretic underpinning to accounting, and also from the different conceptions and beliefs concerning the nature of accounting.

In current western society the term scientific has become synonymous with logic, rigour and experimentation. Science is seen to provide a cost-effective process for the understanding and solving of problems and the development of theory. The word science connotes for many a robust and preferable means of addressing a question. Further, the use of the word science clearly indicates certain research attributes.¹² It can be debated whether the success at-

12. As discussed later, Feyerabend takes a more holistic view of science stating that science "is anything which tries to discover knowledge - what is or what should be." (Laughlin, R.C. On the Nature of Accounting Methodology. *Journal of Business Finance and Accounting* v. 8(3), 1981, p. 340, referring to Feyerabend, P.K. *Against Method*. New Left Books, London. 1975).

tributed to the use of the scientific method is greater than it deserved. Nevertheless the approach has led to increased awareness of analytic and objective approaches to problem-solving and research. The transportability of scientific methodologies to accounting must be examined and in particular, the demarcation between that which might be considered scientific and that which might not.

It might be argued that the primary determinant of scientific enquiry is the subject matter; for example, the nature of physics and astronomy is such that the subject material is apparently so 'objective' and 'real' as to provide a sound basis for the scientific approach. Certainly many of the great scientific advances may be seen in these areas, such as the work of Newton, Hubble, and Einstein.¹³ However the corollary is that the softness and greater indeterminacy of sociological and service activities such as accounting excludes the use of the scientific approach due to their transient and non-universal nature. Thus, ontologically it may be argued that the former are the domain of science and the latter the domain of pseudo-science. Popper⁽²⁵⁾ in particular addressed the distinction between science and pseudo-science, not from the viewpoint of subject matter but from the viewpoint of methodology. He maintained that methodology is the criterion upon which an area is adjudicated scientific or

13. However, the method of discovery used is another question. For example, Einstein says, "There is no logical path to these laws; only intuition, resting on sympathetic understanding," (Hoffmann, B. *Albert Einstein*. Paladin, St Albans, 1975, p. 222.)

pseudo-scientific.^{14,15} Thus if the actors within a discipline are using scientific processes then the area may be considered scientific, whereas the non use of scientific processes will define the area as non-scientific, or to use Popper's language, pseudo-scientific.

Thus the actions of the people themselves by Popper's criterion will determine whether a discipline is scientific. The issue of demarcation is significant, since the application of scientific methodology to accounting might, under Popper's criteria, be considered illegitimate. (For example, approaches that emphasise the generation of theory over testing would be excluded, yet many researchers may consider these 'scientific'.) Hence this issue must be addressed if the use of the scientific approach in accounting is, at least on this criterion, to be valid. Popper argues that the methodology is the criterion that determines whether an approach is scientific and not the subject matter. If this view is accepted then scientific methodology may be legitimately applied to the area of accounting. Tilley⁽²⁶⁾ sums up these arguments coherently.

14. This demarcation question is also addressed by Popper concerning the positivist views (refer to Popper, K.R. *The Logic of Scientific Discovery*. Hutchinson, London (revised) 1972).

15. Feyerabend argues in counter to this view that "... the separation of science and non-science is not only artificial but also detrimental to the advancement of knowledge. If we want to understand ...then we must use all ideas, all methods, and not just a small selection of them." (Feyerabend, P.K. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London, 1975, p.306). The ideas of Feyerabend concerning knowledge and scientific enquiry will be discussed in detail in Chapter Eight, however it should be noted that they are not congruent with those writers (like Popper) who hold to the more traditional view of the role of scientific enquiry in the growth of knowledge.

What Constitutes Scientific Endeavour?

A large number of alternative views exist on scientific endeavour,¹⁶ its nature and methodology and within most of these one can observe certain characteristics which appear central to the scientific approach.¹⁷ Before turning to these underlying characteristics, Hawking⁽²⁷⁾ sums up the eventual goal of science as,

"to provide a single theory that describes the whole universe .."

and that the reasons for this come ultimately down to⁽²⁸⁾,

"humanity's deepest desire for knowledge .."

Thus no matter what metaphysical arguments we might consider nor what level of language sophistication is reached, the overall objective is people's desire for understanding and knowledge. Whether we are concerned about areas of quantum mechanics or about asset valuations, this simply stated goal should not be lost sight of.¹⁸

One of the most common characteristics of the scientific approach is that of causality. Without an acceptance of

16. For example see Feyerabend, P.K. *Science in a Free Society*. New Left Books, Manchester, 1978, p. 33.

17. An early but clear exposition of the elements of the scientific approach is given by Tilley, I. *Accounting as a Scientific Endeavour: Some Questions the American Theorists tend to leave Unanswered*. *Accounting and Business Research* v. 1-2, Autumn 1972, p. 287-297.

18. Note however that Broad and Wade add a second aim to that of gaining knowledge, being the achievement of personal recognition and, by implication, power. They argue that only by understanding this dual role of scientists can one understand the behaviour of the scientific community. This cultural setting of science will be discussed later. (Broad, W. and Wade, N. *Betrayers of the Truth*. Century Publications, London, 1983, p. 212).

causality - that a particular event will lead directly to a consequent event - the study of relationships between events (laws) can provide no more than a description of the elements without statement or consideration of process. The justification for causality being a *prima facie* factor in science is a matter of faith or personal statement by the individual(s) concerned.⁽²⁹⁾ Causality is not proven, verified, or confirmed, it is merely a statement of faith which researchers adhere to, often without question.

The second common characteristic of science is that the relationship between events may be explained and, furthermore, takes place in a logical fashion. Logic of interaction is a presumption on the part of the researcher and theorist and is not a question again of proof, verification or confirmation, but is itself also a statement of faith. There exists no final guarantee that relationships in the "real world" should be or are logical, no matter what depth of inquiry or level of relationship is considered. Thus, for example, although a psychologist may not be able to explain the logic or rationality of a particular action, s/he will still believe there is an ultimate logic underlying the event and that one must merely continue to examine and explore to deeper levels until that logic is perceived or revealed.

This belief in causality and the logic of interaction are statements of faith and not of fact (although they may be).

The other common characteristic of the scientific approach is its empirical basis, that is, there must be some phenomena which the scientist might observe in an open environment, or generate in a controlled situation.⁽³⁰⁾ The scientist will view the phenomena or situation, attempting

to be objective and to understand, in a rational fashion, the causality or the process of the relationship(s). This question of objectivity is a recurring problem of the scientific approach in that it is difficult, if not impossible, for the observer to view 'reality' in a completely independent and detached fashion. Some would argue that the reason for areas such as physics and astronomy to be considered scientific is due to the perceived objectivity of the observation. By comparison, in areas such as psychology, sociology and accounting which involve social and human functions and individual-related phenomena, the separation between the observables and the observer becomes blurred and the observer and observable may themselves be involved in an interactive fashion.¹⁹

The Setting of Research

When undertaking research or attempting to generate knowledge, the activities of the researcher will to a greater or lesser extent be constrained and guided by the views of the community to which s/he belongs. The result of the individual's research will generally be evaluated and judged by peers and if the peer group considers the results are appropriate and "in order" then the new knowledge will be accepted. If, on the other hand, the results are not acceptable to the peer group then normally the work will be disallowed and the views of the researcher, in this instance, will wither and die.⁽³¹⁾ Occasionally, however, the work of an individual within a group will initially be so innovative as to be outrageous and thus unacceptable to the peer group but, in time, the view of the group may itself move closer to the individual's

19. Suppe gives a particularly good coverage of problems of objectivity and the theory/observation separation (refer to Suppe, F. *The Structure of Scientific Theories*. 2nd edn. University of Illinois Press, U.S.A., 1974, p. 66-86). Also refer to Chapter Four following.

research results. Thus the acceptance and understanding of knowledge is a **sociological process** and is not merely the result of an objective observer applying rational considerations to phenomena or some elements of reality. This context of research, discovery and acceptance/rejection will be dealt with in detail later. (Refer Chapter Five in particular.)

Understanding versus Prediction - or is there a role for prediction without theory?

The empiricist will seek to explain a particular observation by generating a general statement which covers that observation. These statements can be verified (or not falsified) only by the resort to observation and experience, and the empiricist, to know the world, must look at the world. Once knowledge or theory has been derived then the scientist will typically make predictions about phenomena and then use observation, via experiment or free (unbiased) observation, to test the predictive capabilities and hence the validity of the theory.

At this stage a distinction should be made between theory generation and prediction. Specifically, a traditional viewpoint (the area of logical positivism and its immediate derivatives) is that the derivation of theory is critical to the process of understanding and that predictions following theory are a logical progression of knowledge generation and refinement of theory. On the other hand, some writers (also commonly labelled positivists!) have argued that the process of theory generation is not important nor a critical precursor to the process of prediction, since they contend that the key characteristic

of a theory is its predictive capabilities.²⁰ They argue that it is irrelevant whether theory includes process that reflects nature or not, because all that is important is the existence of a sound predictor. The role of the positivists may be clearly evidenced in the debate between Samuelson and Friedman in the mid 1960's and in the Watts and Zimmerman school of thought in accounting.²¹ Thus the positivist or instrumentalist²² position is that the theory has no need of process or causality, it must merely meet the objective of being a good predictor. No statement need be made about connections within the black box as long as the output may be used with reasonable success.

This approach may be evidenced in the 1960's and 1970's where the use of large scale data processing facilities and the advent of computer databases allowed the analyst to generate extensive data sets and identify relationships with high coefficients of determination, simply by running

20. The seminal positivist text in accounting is Watts, R.L. and Zimmerman, J.L. *Positive Accounting Theory*. Prentice-Hall, Englewood Cliffs, New Jersey, 1986. They contend that positivism is concerned principally with explanation, prediction and falsification, with the emphasis on the latter two aspects. However Friedman, on whose views most of the Rochester tenets are based, sees prediction as the key element (refer to Friedman, M. *Essays on Positive Economics*. University of Chicago Press, Chicago, 1953).

21. The debate between Samuelson and Friedman was conducted in the *American Economic Review*, Vols 53-55, 1963 to 1965 and Friedman's position is advocated in Friedman, M. *The Methodology of Positive Economics*. In *Essays in Positive Economics*, University of Chicago Press, Chicago, 1953, p. 3-43. The Watts and Zimmerman position is propounded in Watts, R.L. and Zimmerman, J.L. *Towards a Positive Theory of the Determination of Accounting Standards*. *The Accounting Review* v. 53(1), 1978, p. 112-134.

22. Instrumentalist is used here in Mach's sense that theory is a tool for predicting from one set of observation statements to another.

enormous sets of data against each other. These forms of analysis provided very good predictors in certain circumstances (especially in the short run) given that the regression equations were regularly updated. However, due to the lack of process explanation (theory) the models were particularly poor at responding to exogenous change. By contrast, analysts using process models would be alerted to exogenous change via the specification of limitations and key parameters.²³

Thus researchers who were concerned with process-based models (those which were empirical and inductive) looked particularly to the derivation and justification of theory and saw prediction as a corollary (Chambers in particular). In other words, if the theory is representative of 'reality', then accurate prediction should follow. However the positivists or instrumentalists argue that prediction is the key factor. This dichotomy may be characterised as understanding 'reality' versus an axiomatic representation of 'reality'. The positivists' position, their influence and criticisms are discussed in detail in Chapter Four.

It should be noted that the distinction between these two approaches is not as clear-cut as may first appear. Specifically, the positivists must make their calculations and predictions based on data, the selection of which requires theorising (explicit or implicit) so as to include data likely to be worthwhile to the researcher and

23. An analogous situation is seen in the accounting standard setting area. Accounting standards without a conceptual underpinning may be likened to models without process, that is, they deal with *ceterus paribus* situations. In comparison, standard setting as part of a conceptual framework can be likened to a model with process, allowing reaction to change in a more direct and articulating fashion.

to exclude irrelevant material. As a result the positivist does not gather data at random from the universe at large, but will gather data demonstrating some relevance to the area of concern. For example, a researcher following a positivist approach investigating stockmarket reaction time would not normally load in data on hours of sunshine (unless perhaps the performance of the industry segments including tourism and resort hotels was being evaluated). Thus the argument that the positivist is not concerned with the nature of the data nor theoretic process begins to breakdown due to the theory-ladenness of the observables and their selection. Thus the positivist is undertaking research which frequently presupposes some statement of process.

Thus the key distinction between these groups becomes the relative importance of explanation and prediction. For the empiricist the place of explanation is central, but in the Friedman view of positivism the role of prediction is primary.⁽³²⁾ An alternative view of these two approaches is seen in the work of Popper who argued that the nature of scientific enquiry does not hinge on the generation of theory (compared with the inductivist argument), but on the testing and subsequent confirmation or refutation of a theory via prediction. Popper enunciates a number of criteria which a scientific theory must hold to be classed as scientific including the ability to be falsified. Popper requires process in theory but not the inductive generation of theory in the first place. The benefit of Popperian analysis over the positivists is that theory is required to make prediction and criteria are set by which a theory may be judged, particularly the ability of later researchers to replicate and either confirm or falsify the theory. Popper⁽³³⁾ nevertheless sees prediction as the key element of scientific enquiry.

Can the Scientific Approach be Applied to Accounting?

The chapter thus far has considered the characteristics of accounting, the increasing emphasis on theorising in accounting, and the characteristics of science, including the setting of research and the process versus prediction argument. It now turns to consider whether methods of science can be applied in accounting.²⁴

It has earlier been maintained that methodology is the primary determinant of a scientific approach not the material. However, the debate continues over whether the nature of the discipline does in fact constrain and in some way limit the methodology and to what extent methodology can be considered apart from the subject matter.

The more typical arguments as to social science and the scientific approach not mixing are summarised as:

1. That there is an interactive relationship between the researcher and the subject due to humanitarian components and that it is not possible to separate the researcher in an objective fashion from the elements under consideration. This can be clearly demonstrated in the seminal work of the Hawthorne experiments and the effect of the researchers on the behaviour of the researched.⁽³⁴⁾

2. That the scientists will bring their own mind-set, morals and preconceived views of human

24. This debate has been running for many decades, from the early Chambers' work through key latter debates of Sterling (Sterling, R.R. Towards a Science of Accounting. *Financial Analysts Journal* v. 31(5), 1975, p. 28-36) and Stamp (Stamp, E. Why Can Accounting Not Become a Science like Physics? *Abacus* v. 17(1) 1981, p. 13-27) and the Rochester view advocates and their critics, Christenson, Chua et al.

behaviour to bear on the observables. For example, a person with a Marxist background may view a particular situation (in terms of the phenomena and relationships it reveals) quite differently from a person with a *laissez-faire* persuasion. Accordingly, it is argued that it is virtually impossible to separate the prejudice and the views of the scientist from the activities of the subject due to the context of the research.

3. The difficulty in establishing objective and controlled experiments for observation, whereby the researcher can define and measure the parameters and then make statements about the process within the model. Due to the vast array of parameters and possible variables, many of which may be unknown to the researcher, it can be argued that the research technique of using experimentation is effectively unavailable to the social scientist and hence an important method is excluded so weakening the applicability of the scientific approach.

4. The objects of social research which include those persons under scrutiny, are themselves thinking and responding so precluding explicit external control. Thus when undertaking any experiment or situation analysis, the reactions of the observables can not be tied to a direct one-on-one causality. Since the observables are typically cognitive, they have the potential for alternative reactions or behaviour leading to an indeterminacy between the cause and effect. In effect this introduces a second layer to the black box within the model, making determination

of process virtually (if not) impossible.

5. Further criticisms concern the lack of ability in the social science area to objectively and reliably measure the responses of the research subjects. Even at the level of animal behaviour research, there are questions as to valid and reliable measurement techniques. Furthermore, as most measurement is of surrogates rather than the actual relationship under investigation, there is required a level of assumptions about the linkages between the surrogate and the relationship under consideration, before the underlying relationship can itself be considered. This layering of assumptions and hypotheses intertwined with the attempted objective/scientific analysis make scientific consideration of human factors extremely difficult.

This last point is particularly relevant in areas such as marketing, for example, where several criteria will impinge upon a purchase decision such as availability, price, perceived positioning, packaging *etc*, but also there will be several factors operating within the purchaser which will also impinge upon the purchase decision such as general wellbeing, income, gender, consumer preference *etc*. The purchase action therefore demands considerable interpretation as to what makes the purchaser behave as s/he does. Similarly, in attempting to measure motivation and behavioural responses to situations only crude measures of response, at best, may be used and, in effect, little can be said about the process which has actually occurred.

6. The predominant emphasis in the social sciences is on qualitative information, essentially a consequence of the measurement and interactive problems outlined above and this relative lack of quantitative measurement makes it difficult (if not irrelevant) for the researcher to construct theory in a scientific methodological mould. Since much information is qualitative and since the scientific approach does not readily deal with this kind of information, much of the social science research information falls outside the ambit of the scientific approach.

These criticisms of social science research and its lack of relation to scientific approach may all however be countered⁽³⁵⁾, and in so doing, the counter-criticisms substantially undermine the scientific approach itself.

Firstly, there are many traditional areas of science widely accepted as employing the scientific method, in which it is nevertheless not possible to establish an experimental design using laboratory-type controls. In areas such as astro-physics and also quantum theory, there is great difficulty (if not impossibility) in establishing experimental design. In many areas of the natural sciences scientists rely upon judgement and field work that takes place in a relatively unstructured fashion. These areas are commonly regarded as being scientific yet the research approaches used do not conform strictly with the scientific method.

Secondly, the value-ladenness of the researcher⁽³⁶⁾ is just as much an element in natural science research as in the social sciences. The theory-ladenness of the observation⁽³⁷⁾ and the approach taken by the researcher similar-

ly predisposes certain outcomes to be more likely than others. In that regard there is little difference between the social scientist and the physicist. The impact of the researcher upon the subject matter may not be so easy to demonstrate in the natural sciences, but Heisenberg⁽³⁸⁾ clearly demonstrated the effect of observation upon the observed. Clearly, the theory-ladenness of description and analysis by the researcher imposes certain psychological/perceptual views upon the observed.

The measurement problem is of particular concern in the social sciences, but it is also a problem in the natural sciences.²⁵ In more common examples of Newtonian physics it is possible that the causal linkage is obvious. However, in more complex situations with large numbers of variables many of which are not clearly specifiable, the measurement of items becomes difficult and restricted. Furthermore, there may also be substantial interaction between observables with changes not necessarily taking place in an orderly nor anticipated time sequence. Thus in the natural sciences as in the social, there may be levels of complexity and sub-systems within the situation under observation which are not obvious to the researcher, and even if they are known to the researcher, the exact relationship and cybernetics involved are likely to be unknown and at best, only guessed at.

Therefore it may be argued that the problems facing the social sciences, which are taken by some as signals to negate the use of the scientific approach, are not unique to the social sciences and merely serve to highlight problems already faced in the natural sciences. The great-

25. The classic reference work on measurement in the accounting area being Ijiri, Y. *The Foundation of Accounting Measurement: A Mathematical Economic and Behavioural Inquiry*. Prentice-Hall, Englewood Cliffs, 1967.

est difference between the natural and social sciences may well exist in the minds of those participants who have not adequately considered the nature of their disciplines, rather than in the subject matter of the discipline. The basis of scientific enquiry is methodology and not material; methodology is above the *minutiae* of method and elements being researched, and it is the methodology which is the key determinant of scientific analysis, not the setting of the analysis nor the subject matter.

Summary

Thus it is concluded that the use of observation and attempted objectivity in seeking to understand causal relationships and to describe and explain, is just as valid in the accounting field as it is within the natural sciences. Different methods and different methodologies to those which have been used in the natural sciences may be appropriate in accounting. However few would claim that a single methodology and certainly no single method, has been used across the gamut of the natural sciences.

This thesis does not argue that accounting is a science, merely that there is no ontological reason for not using the scientific approach.

Before looking specifically at the scientific approach in accounting, the other major approach to logic and order (structure) in accounting is examined, that of the professional/institutional approach, considering the work on conventions through to the conceptual framework. This then clears the way for the thesis to focus on the use of the scientific approach in accounting and the alternatives that have flowed from it.

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CHAPTER THREE

THEORY BY FIAT

Introduction

Following the depression and through to the present time, the growth of knowledge in accounting has been characterised by two general approaches. These can be labelled the professional or institutional approach and the theoretic approach. The focus of this thesis is on the application of the scientific approach and issues of methodology and hence lies within the theoretic, but the overlap between the two demands a discussion, albeit briefly, of the salient features of the professional or institutional approach. The demarcation between these two is not clear cut and there is substantial interaction between those people practising accounting and those accountants in academia. The professional approach is predictably driven by the needs of practitioners. However much of the logic and outcomes of this approach flow into the academic. For example, the work on conceptual frameworks has been largely driven by the need of practising accountants to have a set of articulating standards.¹ The process of working from objectives via a deductive route to articulating standards and so attempting to bring some rigour and logic to the practice of accounting has also been the concern of many academics.

The professional approach to knowledge growth in account-

1. Although political factors are obviously also important, in particular refer to Watts, R.L. and Zimmerman, J.L. (The Demand for and Supply of Accounting Theories: The Market for Excuses. *The Accounting Review* v. 54(2), 1979, p. 273-305) and Solomons, D. (The Politicisation of Accounting. *The Journal of Accountancy* v. 146, 1978, p. 65-72, and The Political Implications of Accounting and Accounting Standard Setting. *Accounting and Business Research* v. 50, 1983, p. 107-118.)

ing has culminated in the work on the conceptual framework and it has brought the accounting practitioner and the accounting academic much closer, particularly during the latter 1970's and the 1980's. Up until this time work was much more prescriptive as denoted by the title of this chapter, Theory by Fiat.²

Thus this chapter considers the move from conventions, standards, principles etc of the 1930's and 1940's, through the work of the Accounting Principles Board (APB) and to the conceptual framework of the last two decades. The United States experience is used to demonstrate this development since the various phases are clearly reflected and there exists good documentation.

Background

Much of the conventions and standards work developed out of the aftermath of the Great Depression and tended to be driven by the immediacy of practice-based problems and may thus be likened to management by exception. Some writers have argued that certain conventions appear more fundamental to the practice of accounting than others - such as going concern, monetary measurement and conservatism - but essentially the conventions and standards are little more than derivations from practice.⁽¹⁾ Although widely accepted conventions do tend to constrain later pronouncements, they do not typically provide a logically articulating framework nor an integrated theoretic framework. Thus the

2. The word theory is used here to denote a practice based structure of rules and conventions and not theorising and theory construction as is articulated today. The use of the word theory for these rules and conventions remained until further theorising *per se* resulted in a better understanding of the different processes involved in the determination of rules and conventions versus theory construction and the more philosophical perspective of theorising as characterised initially by the work of Chambers.

conventions and standards approach has in general led to an *ad hoc* series of statements, standards, research drafts and particular opinions which have at times articulated, but have more often stood in isolation to one another and at other times have been clearly in conflict.

Conventions and Standards Formulation

There has not been any one method or methodology followed in this approach, except perhaps that of pragmatism. Frequently this has meant that a committee of leading individuals in an area is drawn together to consider a particular problem and, based largely on their perception of an acceptable solution, a recommendation has resulted. Essentially then the conventions and standards approach has been driven by the practitioners of accounting. There has been little or no theoretic guidance or methodological prescription, either in directing the derivation of rules or in evaluating their effectiveness. Thus evaluation of performance has been based more on whether the problem still existed and the amount of pressure brought to bear by practitioners, than on any particular set of technical or evaluative criteria.

This approach is reactive and problem driven and has taken place outside any methodological or conceptual framework. It is only more recently that accountants have moved towards a more conceptual approach and have begun to develop various conceptual frameworks.³

3. The Financial Accounting Standards Board (FASB) provided the key work on the conceptual framework, articulated through its Statements on Financial Accounting Concepts series (1978 and onwards). Other countries have followed, and New Zealand is currently considering exposure drafts that will be the basis of a conceptual framework.

Conventions and Standards in the United States

United States Experience

The next three sections provide an overview of developments within this approach in the United States, a consideration of examples typifying the conventions and standards research method, and a discussion of the development of the conceptual framework. Developments within accounting in the United States have dominated the accounting discipline worldwide in the last fifty years. It is not the purpose of this chapter to present an exhaustive and comprehensive coverage of this area, rather it is to discuss work that has typified the conventions and standards approach.

Overview

The most widely referenced experience concerning the development of standards and conventions is found in the United States where the primary impetus for their development was the crisis in financial circles in the late 1920's and early 1930's following the stockmarket collapse.⁴ This period saw a general acceptance of the need for more control of accounting, reporting and disclosure, and recognition that accounting practices were inadequate for the then modern needs of business. From 1939 to 1959 the Committee on Accounting Procedure (a special committee of the American Institute of Accountants, later to become the American Institute of Certified Public Accountants [AICPA]) produced fifty-one Accounting Research Bulletins augmented by accounting terminology bulletins. Although the Research Bulletins were not mandatory on members, they

4. The work of the late 1920's and early 1930's is summarised by G.R. Byrne in his essay presented to the American Institute of Accountants' Fiftieth Anniversary Celebration, *To What Extent Can the Practice of Accounting be Reduced to Rules and Standards?* In American Institute of Accountants Fiftieth Anniversary Celebration 1937, Garland Publishing, New York, 1982, p. 243-254.

were generally considered to be the basis for practice and that to not follow them could expose the practitioner to legal challenge. These bulletins dealt with specific problems and particular new areas.

This problem-specific approach resulted in a particular method(s) being recommended, leading the profession to deal with a particular situation(s) in a relatively consistent and structured manner. Although a particular method may have had major shortcomings and been subjected to severe criticism by practitioners, consistency was introduced into the practice of accounting. Consistency did not however imply appropriateness, and justification for adherence rested on the authority of the professional organisation rather than on a logical argument as to the strengths and weaknesses of the method. Secondly, due to the largely problem-specific approach, the Bulletins tended to be short-sighted and did not lead to a codified or articulating structure. This reactive approach meant that some Bulletins became out of date and were infrequently updated, while others dealt with issues of the moment and hence embodied more modern approaches and ideas. Thus a hotch-potch of Bulletins resulted, dealing with different problems and in different temporal contexts. This situation continued through the 1950's and into the 1960's.⁽²⁾ It was this general lack of overview and conceptualisation that led writers such as Chambers⁽³⁾ and Mattessich⁽⁴⁾ in the late 1950's and particularly in the 1960's to call firstly, for a more scientific approach to problem-solving and secondly, for a more deducto-normative approach in order to better establish a framework for practice.

Criticism of the work of the Committee on Accounting Procedure increased in the 1950's due to the slow rate of progress on generally accepted accounting principles and

for not keeping pace with practitioners' needs. It was during this period, and particularly the inflationary period following the Korean War boom, that possibly the most important criticism of the historic cost bases of account preparation emerged. This problem, which perhaps eclipsed all others when considering the anomalies within the accounting system, was how to deal with the effects of inflation.

General price level changes and the various attempts to deal with the effects in financial statements led to increasing flexibility in the manner in which reporting was carried out and a growing awareness that the situation as reported by accountants did not adequately reflect a true and fair position of entities. In an attempt to address these issues the Accounting Principles Board (APB) and the Accounting Research Division were established in 1959 with the aims of providing general principles to guide practice and of formulating specific rules for practice backed by a strong research underpinning. To the latter end, a full-time research staff was employed to produce the Accounting Research Studies (ARS). Again however, the Accounting Principles Board dealt mainly with practical issues of accounting, and although required to address conceptual questions, largely failed to do so. However the need for wider representation on the Board was recognised and a broader base of membership was included bringing together those from the profession, government, industry and academia. To hasten the adoption of promulgations from the Accounting Principles Board, in 1964 opinions were made mandatory on members of the profession. Divergence from these had to be justified and the impact of the variation explained.

One of the ways in which the Accounting Principles Board attempted to meet the requirement of providing a structure

for concepts and practice was via publication of research studies. The Accounting Research Studies were also seen as a vehicle for new ideas and for promoting ways of dealing with novel issues. While these Accounting Research Studies were produced by the American Institute of Certified Public Accountants, they were always the work of the particular author(s) and were not official pronouncements. It can be noted that Accounting Research Studies No. 1 (1961) and No. 3 (1962), in particular, were not well received and were widely criticised as being too conceptual and somewhat normative.^{(5),(6)} Both of these works attempted to deal with key conventions and problems of price level impact. When viewed from the perspective of today, they were quite mild in their conclusions and certainly did not threaten the basis of accounting by undermining the cost principle. Nevertheless due to the level of criticism they generated a further study, Accounting Research Study No 7 (1965), was commissioned.⁽⁷⁾ This saw a move back to the approaches of the 1930's with the compilation of a list of generally accepted accounting principles. This work by Grady exemplifies the standard-setting, conventions approach in that it codified existing views (although in this instance it was the result of a more radical piece of work being unacceptable). Thus the acceptance of Accounting Research Studies and pronouncements by the Accounting Principles Board was largely based on political and member-acceptability grounds, rather than on logic, consistency and merit. Consequently, there was a further widening of the gap between what practising accountants did and the changing demands being placed on accountants by a changing environment.

Method Typifying the Conventions and Standards Approach

The method followed by this approach may (in generalisation) be summed up by considering key works which were carried out to identify accounting conventions. These

works sought to distill from accounting practice underlying doctrines and conventions that could then be restated as a guide for accounting practice. The derivation of accounting conventions was typically carried out by examination of practice and not from any consideration of the role that conventions played in the accounting process or any wider conceptual issues. The work of Paton⁽⁸⁾ in 1922 is generally considered as the first authoritative work in the area but the work of Sanders, Hatfield and Moore⁽⁹⁾ in 1938 which was aimed at the codification of accounting principles in order to provide a basis for the improvement of corporate reporting, was typical of the methods employed by writers in this era.⁵

The method employed by Sanders *et al* involved leading practitioners being surveyed for their opinion on the relative importance and merits of the various conventions. Thus the research was carried out almost exclusively with existing accountants; it had no input from academics nor did it seek input from outside the practice-oriented paradigm, nor from those outside the United States. The method involved:

- face to face interviews with leading practitioners principally addressing their preferred methods (where interviews were not possible, correspondence was undertaken).
- a review of available literature, however this literature was itself a product of the times and based largely on the practices of leading accountants.
- an examination of legal requirements, in particular minimum requirements and legal

5. Note that the term method is used since the methodology was virtually non-existent, except to say, *a priori*, that practice by leading practitioners was seen as the basis for the guidance of other practitioners.

constraints, to determine how these would impinge upon minimum accounting practices.

- a review of selected company reports and prospecti to determine preferred practice by leading companies.

It is readily apparent that the work actually canvassed the same views several times over. The same leading practitioners who were typically responsible for the leading sets of accounts were interviewed. These same accountants wrote on better practice and techniques, or about sets of accounts that were considered to be leading examples in the field, which themselves had been compiled by other leading practitioners.

The result of the Sanders, Hatfield and Moore study was a series of what are best classed as conventions. These may be considered as a guide to 'good accounting practice'. Sanders et al⁽¹⁰⁾ drew conclusions in three principal areas:

- firstly, general principles guiding the preparation of accounts which included disclosure, objectivity, consistency, conservatism, allocation criteria and correct coding.
- secondly, principles that guided the preparation of the Income Statement and Balance Sheet such as realisation, classification, extraordinary items, valuation of inventory, and correct end-of-year adjustments.
- and finally, recommendations on the use of general notes to accounts, particularly to be used for consolidations and general notes to the accounts.

The work by Sanders et al provided guidance for, and standardisation of, practice largely via description.

Their approach, which was an *ad hoc* one based on the examination and distillation of practice *ex post facto*, characterises the work of the rules, standards and conventions approach, particularly through to the end of the 1950's. It is also typical of the approach of some latter works such as Grady⁽¹¹⁾. In commenting on Littleton's views expressed in the 1950's, Chambers⁽¹²⁾ sums up the argument when he says,

"Professor Littleton's study is limited to methods and procedures which have come to be accepted."

Many other writers and professional bodies have produced similar works, but they remain little more than restatements of other work, following very similar methods as Sanders, Hatfield and Moore and achieving little more than establishing guidelines for practice.

The Move from Descriptive Theory to a Conceptual Framework - Structure by Fiat

The work of the Accounting Principles Board failed to provide an adequate structure or framework to guide accounting development. Largely as a result of this failure the Financial Accounting Standards Board (FASB) was established in 1973.⁽¹³⁾ The Financial Accounting Standards Board was created in a more independent form than the Accounting Principles Board and was designed to be a publicly accountable forum. The brief for the Financial Accounting Standards Board was broadened (by comparison with the Accounting Principles Board) to encompass the wider needs of the community, including the work of not-for-profit organisations, as well as measurement problems. The Board initially produced a number of Financial Accounting Standards (similar to the Accounting Principles Board' Statements) and although in the mid 1970's it attracted similar criticism as the Accounting Principles Board it mitigated these shortcomings via the establish-

ment of a series of Statements on Financial Accounting Concepts and the development of a conceptual framework for financial accounting and reporting.⁶

Although the conceptual framework approach is much broader in perspective than earlier work, many of the same problems continued. Specifically, it was a direct result of failings of the old approach rather than growing from a desire to improve accounting practice by raising the level of theorising in accounting. Secondly, the response is largely aimed at meeting particular needs rather than dealing with the process of change and evaluation. Finally, although a framework is advocated, the recommendations have little or no methodology and are largely controlled by a small group of influential members, and hence the phrase, theory by fiat.

The aim of the framework was to provide a structure for the development of accounting practice via the establishment of a series of goals, concepts, decision criteria, down to the guidelines for the implementation of particular rules. It was an attempt to move beyond the descriptive work of earlier periods.⁷ Initially in the framework

6. The work of the Financial Accounting Standards Board on the conceptual framework is detailed in the Statements of Financial Accounting Concepts series and work on accounting standards is found in the Financial Accounting Standards Board Standards series.

7. The work of the Wheat Study Group (*Establishing Financial Accounting Standards: Report of the Study on Establishment of Accounting Principles*. American Institute of Certified Public Accountants, New York, 1972) and the Trueblood Committee (Study Group on the Objectives of Financial Statements, *Objectives of Financial Statements*. American Institute of Certified Public Accountants, New York, 1973) should be noted as providing impetus for the conceptual framework. The former recommended the establishment of the FASB to replace the APB and the latter drew up a conceptual framework.

a number of goals are stated for financial accounting, including not-for-profit and social accounting areas, followed by a further series of Statements of Financial Accounting Concepts which would elaborate and refine certain areas of the Statement of Financial Accounting Concepts No. 1 (1978).⁽¹⁴⁾

The jury is still out on the degree of success of the Financial Accounting Standards Board's financial accounting objectives. However, in that the Board and the conceptual framework project have survived until now suggests some amount of success and acceptance. Whether the Board succeeds in the longer term must be in doubt, mainly due to the political forces that may be ranged against it. On this Watts and Zimmerman⁽¹⁵⁾ say,

"The history of the Committee on Accounting Procedure, the Accounting Principles Board and the Financial Accounting Standards Board are replete with examples of managements and industries exerting political pressure on the standard setting bodies."

Watts and Zimmerman are nevertheless well known for their critical view of financial institutions including the Financial Accounting Standards Board, and their advocacy for a free market approach. Further, the impact and importance of political factors was one of the reasons for the demise of the Accounting Principles Board and the creation of the Financial Accounting Standards Board.

The essential problem with the approach of the Financial Accounting Standards Board is the competing range of activities it is charged with undertaking. On one hand it is required to deal with the day by day issues concerning how practising accountants should deal with particular problems and situations. Secondly, it is required to deal with future developments, procedures for handling these,

and research. It must also liaise between the profession and the business community, at times defending the profession against attack from numerous sources including industry, politicians, consumer groups and members of the profession itself. While carrying out these activities it also has to maintain its own credibility and status if its future-oriented work in particular is to proceed effectively. To achieve the delicate balance between these four aspects the Financial Accounting Standards Board needs skillful leadership that must inspire yet not alienate and at the same time resolve problems of the moment.

Summary

It can be seen that the professional/institutional approach, although playing an important part in the raising of the overall quality of practice, was destined to be no more than a guide to practice since it lacked theoretic structure and logical development which would enable it to be anything other than reactive.⁽¹⁶⁾ The professional or institutional approach is essential for guiding day by day practice, but it can not satisfactorily provide a guide to future problem solution, and it has certainly not provided even a coherent structure for the practitioner who has been left with a large number of possible tools to choose from for particular circumstances, many of which can not be adequately used side by side.

Thus the professional/institutional approach, labelled accounting by convention and fiat, played an important role at the time of its emergence in helping the establishment of good practice. However it provided neither a method nor methodology for the selection of alternative techniques given normal circumstances, nor did the approach provide an overall structure or framework that could be used to judge alternative approaches. Once these conventions and standards were used in practice, their

methodological shortcomings became increasingly apparent.

The key shortcomings can be summarised as follows:

(a) The process that derives conventions based on a description of practice and then uses those conventions in a prescriptive manner for practice is clearly circular. This circularity impounds any faults and shortcomings which the conventions then carry with them.

(b) This descriptive approach is open to bias on the part of the researcher in selection of interviewees. It would be presumptuous to suggest that the Accounting Research Studies were deliberately biased, but it is not unreasonable to suggest that the recommendations have been clouded, to some extent, by the need for political acceptability. The reaction to Accounting Research Study No. 1 and No. 3 is evidence of this, in particular the APB's dismissal of the latter as being too radical.

(c) The writers of the time were more concerned with authoritative justification for methods so that members could receive guidance and support, rather than the logical derivation and justification of particular approaches. This is not to say that the objectives and the methods of the period were lacking in terms of what they set out to provide, but that the approach could not provide a theoretic structure and theory basis for accounting.

(d) The researchers (and agencies sponsoring research) appear to have been professionally oriented in their work and have hence represented a particular grouping of opinion - that of the then current professional body. This institutional perspective (bias) is likely

to have significantly prejudiced the researchers into presenting the institutional view, such that any radical departure from this stance would have been impossible to proceed with.

(e) It may be possible for meaningful policy derivation to occur out of the distillation of practice, but only a normative and deductive approach could provide a structure sufficient to encompass wide-ranging problem areas and that could also provide procedures to guide future practice and non-routine decision making. It is heroic to suggest that where a conceptual structure does not exist the guidelines for such an alternative structure may be derived from an examination of practice. Thus the results of this work would be heavily based around a description of good practice.

(f) Fundamental research concerning the nature of accounting, the users of accounting information and their needs, and wider social issues, were almost completely ignored under this approach.

The work in the conceptual framework area is essentially an extension of the standards approach and although large amounts of resources were expended on research (particularly by the Financial Accounting Standards Board), much has been aimed at reviewing accounting standards. The conceptual framework itself is largely a statement of wishes and goals proposed by researchers and endorsed by the Financial Accounting Standards Board; for example, the objectives of SFAC No. 1 are essentially personal belief statements. The framework is thus more in the form of a super-standard than a theory construct, hence the classification of theory by fiat. The conceptual framework may be summarised as a normative-fiat with minimal theory or methodology, hence distinguishing it from deducto-norma-

tive theory *per se*.

Conclusion

These developments established a sound basis for practice which in its own way highlighted fundamental theory and methodology questions needing to be addressed. In summary, the principal limitations were:

- the lack of an overall theory that might bind accounting together;
- a lack of research methodologies to guide the derivation of theory;
- no avenue for the raising of radical or creative questions and their possible resolution.

Writers in the 1960's were still arguing that accounting needed the development of conventions and standards rather than that of theory and conceptualisation. However, theorists of the late 1950's were beginning to argue the need for rigour and scientific enquiry within accounting, as well as the need to consider the nature, scope and objectives of accounting. These two thrusts resulted in firstly, the calling for the use of scientific methodologies in accounting. Secondly, the use of normative-deductive reasoning was held to be necessary in order to establish and debate the nature of objectives and goals for accounting.

One writer, Most⁽¹⁷⁾, summarised the position in stating,

"The development of generally accepted accounting principles or accounting standards has been a difficult process. The present state, both in the United States, and abroad, is a mass of opinions, rules and official regulations which ... can by no means ... be regarded as satisfactory."

Most saw the development of a more rigorous form of analy-

sis through the 1960's as perhaps offering some solution to the problems of the profession. He argued that this might bring some greater structure and logic to the house of accounting. He says⁽¹⁸⁾,

"During the 1960's a mini scientific revolution appears to have started to bring some order into the chaotic situation."

What he alludes to as a mini scientific revolution is the concern of much of this thesis.

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CHAPTER FOUR

SCIENTIFIC APPROACH

Introduction

The scientific approach has assumed a level of importance in western culture such that it dominates the gathering of knowledge to the extent that at times it appears there are no other approaches. This preeminence (perceived and actual) so stifles other approaches that the very existence of other alternatives might be questioned. The widespread acclaim of the scientific approach is partly due to its popularisation through the media and to researchers following acceptable approaches. Unfortunately this popularisation has been accompanied by a lack of understanding as to its assumptions, implications and limitations. However there is no doubting the impact and importance of the scientific approach.

Accounting writers have been just as eager to embrace this method as other social scientists. Chambers in 1955 produced *Blueprint for a Theory of Accounting*⁽¹⁾ in which he advocated a more rigorous approach to the development of theory and in particular, called for a more scientific approach to the discipline. This was followed in the same year by *A Scientific Pattern for Accounting Theory*⁽²⁾ which explicitly advocated the use of the scientific approach within the discipline of accounting. These works engendered considerable debate in the literature concerning both the appropriateness of scientific method in accounting and the nature of the scientific method. Mattessich⁽³⁾, Schroder⁽⁴⁾, Kam⁽⁵⁾ and Tilley⁽⁶⁾ were writers following the lead of Chambers. The decade of the 1980's has seen a resurgence of the debate concerning scientific method (now referred to as positivism or positive accounting theory) rivaling that of thirty years ago. In particular the works of Watts and Zimmerman (from 1978

to the present) have provided a focus for this debate.

The call for a scientific approach to accounting must be seen in context, against a background of searching for a more rigorous basis to both the practice and theory of accounting. The move towards the scientific method in accounting was congruent with a new era for its theoretical questioning, that led to the emergence of accounting theory in its own right. It is significant to note that in the philosophy of science area the method of science had effectively been overthrown when we (accountants) were in the process of adopting it.⁽⁷⁾,⁽⁸⁾

Outline

This chapter will initially consider further the nature of the scientific approach and its place in society. The received view, induction, correlation and causality, deduction and the subsequent fashion for normativism are then covered. This is followed by a section covering the deducto-normative approach in accounting. Popper's work circumventing induction is introduced and the chapter is drawn together by considering the work and views of Watts and Zimmerman.

The Scientific Approach

The scientific approach is generally considered to be a combination of induction and deduction, yet there is little agreement on what the scientific method actually is.⁽⁹⁾ Devine⁽¹⁰⁾ states,

"scientific method is comprised primarily of the interaction of deductive methods and the philosophical doctrine known as empiricism".

On this question, Yu⁽¹¹⁾ says,

"just what is meant by scientific method is not always clear and precise the substance of scientific method varies

from one scientist to another. In general, it is a process of enquiry requiring the use of deduction and induction with emphasis placed on the latter (and experimentation), treating the former as part of the whole system."

However all writers have not seen such a balance between induction and deduction and certainly Darwin, one of the major early scientific method exponents, did not. He said⁽¹²⁾,

"I find that my mind is so fixed by the inductive method that I can not appreciate deductive reasoning."

Yet it was Darwin's observations of particular adaptive changes in certain species that led him to propose a more universal theory (speculation) of evolutionary development. His latter speculation can be termed as deduction, which has subsequently been tested in numerous situations.

With the benefit of hindsight, one can maintain that Darwin followed an approach very similar to that described by Yu above, that is, experimentation of relatively specific and closely defined observations put in context via deductive prognosis.

It may be generally considered that the scientific approach has to be, or at least has to show, significant empirical content to be adjudged scientific. As a result, Henderson and Peirson⁽¹³⁾ describe the movement towards the scientific approach as a move towards empiricism. The contention that accounting has become more scientific is founded upon a number of trends including:

- accounting research is becoming more empirical, more mathematical and statistical, and, allied with these, more rigour is being applied to the testing of hypothesis;
- theories derived normatively and deductively have

been declining in use due largely to their lack of falsifiability and, by argument, their lack of meeting the criterion of being scientific, and so-called positive research appears to be in the ascendancy;

- large sums of money have been made available to empirical research; and

- many writers now adopt a scientific mode, that is they follow what might be called the scientific approach in their writing;

The extent of the movement towards the scientific approach is certainly widespread among academics. A particular example is the field of finance where a scientific approach is almost universally followed. Many other areas also appear to be requiring much greater empiricism to gain credible publication. In a recent discussion with Trotman¹ he maintained there was little place for theorising in accounting unless it could be empirically tested and the current emphasis on "publish or perish" demanded the empirical (scientific) approaches over the less rigorous.

Caplan⁽¹⁴⁾ summarised the classic four steps in the scientific process as,

- a. the identification of the problem,*
- b. the accumulation of relevant data,*
- c. the formulation of hypotheses from the data, and*
- d. the empirical testing of the hypotheses."*

These four steps, in various forms, are expounded by a number of writers. Caplan's approach, which shows the accumulation of data before the formulation of hypotheses,

1. Day One of Seminar on Selected Methods in Accounting Research, University of New South Wales, Sydney, Australia, 25-26 September 1990.

suggests a strongly inductive perspective. Many might consider that the hypothesis forming stage would follow the problem identification phase in order to better determine the framework or process. To accumulate data in the absence of a model, aim or objective is merely to gather data on a random and universal basis. In any practical sense, this approach is impossible. The practical gathering of data will be constrained by views of the nature of the process, which is effectively a form of hypothesis even if not stated in testable or falsifiable terms. Thus a more realistic approach would be:

- identification of problem;
- formulation of hypothesis;
- accumulation of data; and
- testing of hypotheses.

It should be noted that this essential difference in approach is at the heart of the problem of the theory-ladenness of observation and in particular, the lack of separation between theory and observation planes.²

Commenting on Caplan's four stages³ of the scientific

2. This question is addressed later in the chapter.

3. Henderson and Peirson label this approach neo-empirical as it is typically concerned with specific hypotheses and theories, not the development of general theories. Earlier work in science and accounting sought to establish relatively universal theories, whereas researchers tend to concentrate on detail applications and the solving of particular problems. This emphasis on the micro aspects of an area was labelled neo-empirical since Henderson and Peirson perceived it as a new emphasis aimed at incremental developments rather than earth-shattering significant advancements. However, the scope of research does not justify alternate nomenclature concerning the method. Method is the key element to be considered when labelling an approach, not the material or the scope of the research. (Henderson, M.S. and Peirson, C.G. *Financial Accounting Theory: Its Nature and Development*. Longman Cheshire, Melbourne, Australia, 1983.)

method, Henderson and Peirson⁽¹⁵⁾ state that,

"the final step ... of the scientific method has been emphasised to such an extent that accounting research is usually described as empirical."

Thus in general the process of the scientific approach can be illustrated as follows:

- * Certain anomalies or uncertainties will develop in an area of study which will not be clearly recognised initially. As these anomalies develop they are more widely perceived/acknowledged and work will be undertaken to identify the particular problem or situation disrupting the *status quo*.
- * Whether the irregularity is pursued or not can depend on the amount of dislocation within the study area, or upon the researcher's whim in wishing to explore and define the nature of the anomaly and perhaps pursue a solution.
- * Once a problem is defined, then the first major action will be the collection and organisation of data in order to better define and describe the nature of the anomaly. The thrust at this stage is to explore relationships and process within the problem or anomaly under examination.
- * A tentative statement of causality will then be formulated. This hypothesis is likely to be conjectural, being based on a preliminary evaluation of the facts (often relatively unstructured) by an operator who is normally more familiar with the *status quo*. Nevertheless, a tentative statement of relationship is formed. At this stage necessary constraints to the reasoning process, definitions of terminology as well as parameters of the larger area of study are also stated.
- * Following the statement of hypothesis, predictions will be made and a form of experiment or observation

will be carried out to determine the validity of the hypothesis.

A number of issues concerning the hypothesis such as questions of confirmation, refutation, verification and proof are held in different regard by different writers. Typically confirmation is considered to be a fundamental requirement following hypothesis formulation, in that if a series of observations and experiments are pursued which at best confirm and at least do not refute the hypothesis, then the hypothesis is frequently said to be confirmed. Unfortunately, the word proof tends to be used when several confirmations have taken place. This semantic difference (confirmation versus proof), while partly the result of lack of clarity on the users' part, tends to impart a greater status to the relationship under study than is warranted, that is, confirmation implies currently correct, but proof connotes a fundamental relationship. Central to these concepts is the hypothesis which itself can be viewed in several different contexts.

- * When testing an hypothesis, especially in a social science such as accounting, the use of experimentation as a technique is seldom possible. More often only aggregated and market data can be used. Thus the hypothesis may only be tested against a sample drawn to represent the population (of data) under consideration. This brings into play issues of probability and judgement, not absolutes, so constraining what may be said concerning the validity of the hypothesis.
- * If the hypothesis is shown to hold under most circumstances but not in all, then the hypothesis can be

modified to incorporate new information⁴ and to exclude certain areas where it is not applicable. If the hypothesis remains valid for some time it can become incorrectly referred to as a law. Labelling any hypothesis as a law overlooks the fact that ongoing work will continually refine the hypothesis, exploring and extending its boundaries and applicability.

- * The emergence and maturation of the hypothesis accompanied by its gradual dissemination through the discipline can result in an established and entrenched viewpoint being held on the relationships so disclosed. It should be realised however that hypotheses are only valid until a better puzzle-solving statement is generated.⁽¹⁶⁾
- * In a hypothetical pure and perfect world (a world where there is no regulator of information and all individuals act as perfect personal agents and all information is instantaneously and perfectly available to individuals) one might say that a confirmed hypothesis would by definition be a law. Perhaps in a state of nirvana or some such ultimate position of deity this is the case, however plodding mortals may not reach further than an hypothesis.

Thus the hypothesis remains as such. It may hold or appear to hold for a long period of time and/or over a wide variety of conditions, but it nevertheless is no more than an hypothesis unless the conditions of the preceding paragraphs are met.

This process of scientific enquiry and hypothesis testing

4. See Lakatos and the use of the positive heuristic, in Chalmers, A.F. *What is this Thing Called Science?* University of Queensland Press, St. Lucia, Queensland, 2nd edn, 1982.

is iterative and therefore essentially never-ending. Frequently, periods of enquiry will curl in upon themselves becoming more and more specific and detailed until a micro area is extensively researched. In other situations, the process of enquiry will lead to an expanding programme which at no stage reaches a logical end or closure.

Despite its iterative character, scientific enquiry is generally seen as an incremental process, building upon earlier hypotheses and speculations and, at all times, striving for a better understanding of the nature of 'reality'. At certain times the process may be hijacked by individuals for their own ends but this is generally considered an aberration of the process and not scientific. Newton was not objective and impartial in his dealings with Leibniz concerning the development of calculus.^{(17), (18)} As research becomes increasingly driven by commercial issues, qualities of the independent thinker will become more and more submerged by the struggle for funding and survival.

The Tenets of the Scientific Approach

The basis of the traditional views of the scientific approach, namely logical positivism and the received view, is the process of induction. This linkage between the world of observables and the world of theory is the tenet upon which the mechanistic views of scientific method were based. Growing out of the period of the Industrial Revolution and the technological domination of that era, logical positivism emerged in the early 1900's and, in a reduced form, continued as the received view. There have been many criticisms of the tenets of this approach, dating back a

considerable time,⁵ but it was not until the 1950's that widespread criticisms within the area of the philosophy of science were such that this approach was largely discredited.⁽¹⁹⁾ Interestingly, it was also in this period of the 1950's and 1960's that accounting writers and theorists looked beyond the traditional bounds of accounting thought for methods that might assist in developing more rigorous theorising.

The scientific approach initially employed was essentially that of the received view and primarily that of theory derivation via induction. In the early stages of the application of the scientific approach in accounting there was substantial debate over the nature of the scientific approach^{(20), (21), (22)} and over the role of deduction.⁽²³⁾ This was exacerbated by those theorists who, in looking for an all-encompassing theory of accounting, adopted a normative view. From the mid 1950's there has been a mixing of scientific methodology on one hand and calls for a deducto-normative approach on another.

Although the absolute separation of induction and deduction does not occur in everyday research, the process of theory-derivation which is the cornerstone of induction versus the process of testing which is the essence of deduction, are such fundamental differences that the two deserve separate attention. In this thesis, induction and deduction are discussed separately but are considered as contiguous.

5. One of the earliest writings on this was Hume, D. A *Treatise of Human Nature*. Clarendon Press, Oxford, U.K., 1740.

The Received View⁶

The use of induction as a method of deriving theory has been popular in accounting particularly in the area of finance, partly as a result of the power of electronic data processing and the improved accessibility of statistical techniques. Large amounts of data have readily been analysed to derive relationships in the search for causal linkages.

Induction is the linkage from observation to theory, as Hendriksen⁽²⁴⁾ states it is,

"the process of ... drawing generalised conclusions from detailed observations and measurements".

This definition is similar to that used by Clover and Balsley⁽²⁵⁾ who describe the inductive method as

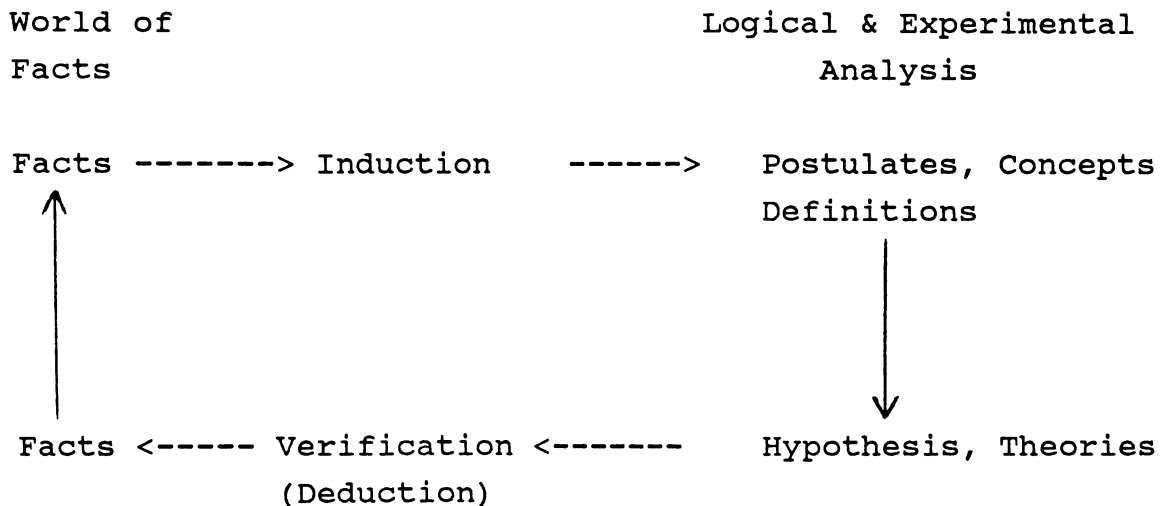
" ... studying many individual instances or cases in order to formulate a generalised conclusion".

Thus induction is the process of linking observables, or the observation plane, with the theory or construct plane.⁷ Induction is the process whereby general principles are derived from generalisations of particular sets of observations. Thus one proceeds from a series of ob-

6. The growth and development of the received view can be seen in the work of the Vienna Circle, a group of philosophers, mathematicians and scientists who extended the work of Mach and Carnap (1923), one of the earliest published accounts of the received view. (Refer to Suppe, F. *The Structure of Scientific Theories*. 2nd. edn, University of Illinois Press, U.S.A., 1974, p. 6-15.)

7. Popper described induction as passing "... from singular statements ... such as accounts of the results of observations or experiments, to universal statements, such as hypotheses or theories." (Popper, K.R. *The Logic of Scientific Discovery*. Hutchinson, London, (revised) 1972, p. 27).

served events to the formation of an explanatory statement. Deductions are then made from the theory in order to make predictions concerning future events. Certainly, both induction and deduction run hand in hand. However it is the derivation of theory that is the essence of induction. Yu⁽²⁶⁾ has described the process via the following schematic:



Three elements are central to the inductive approach, observation, induction and theory. As the legitimacy of theory is held to be based entirely around the observation plane allowing for no metaphysical input whatsoever, the key to credibility is the quality and nature of observation.⁽²⁷⁾ To this end, Clover and Balsley⁽²⁸⁾ establish four criteria for the carrying out of sound observational practice,

- "(1) Observation must be correctly performed and recorded; data studied must be accurate and must be collected from the universe in which the researcher is interested.
- (2) Observations must cover representative cases.
- (3) Observations must cover a sufficient number of cases.
- (4) Conclusions must be confined to statements that are substantiated by the findings and are not general or

too inclusive."

The researcher must restrict the statements of theory to what can be justified based on the scope of the observations. As the theory rests entirely on the gamut of observation, theory can say no more than that to which the scope of the observations may logically lead. Thus the researcher must guard against extrapolating from the observations and then claiming that these are justified by the observations. Extrapolation or generalisation from theory derived via induction is not legitimate when judged by the methodology of induction itself. Any extrapolation can only be justified on the basis of the researcher's own views. Thus theory derived from observation by induction is based totally upon the observation and the researcher can make no broader statement than, " ... at a particular time and under particularly defined circumstances, a particular relationship appeared to hold". In practice however, there is often a gap between the methodology and resulting practice in that broader interpretations and conclusions are placed on research findings than can be validated by the methodology of the method applied. These extensions are not a fault of the technique but arise from a misunderstanding of the method and its methodology.

Particular Problems with the Inductive Approach

Particular problems of the various aspects of the inductive approach can be noted. These can be grouped under the categories of: the observation-theory plane distinction, the process of measurement, and induction itself.

One of the fundamental tenets of the inductive approach (or the received view) is the observation-theory distinction. This distinction between the observable and theory is fundamental since the validity of theory is established

on the objectiveness of observation.⁸ Separation of the observation statement from the theory construct is critical to the overall legitimacy of the received view. However, argument within the philosophy of science area has generally held that the observation-theory distinction is not feasible - that observations are theory dependent and that an element of theory exists within the observational plane.^{9, (29)} Thus it is not possible to consider these fields as being discrete. Observation is impacted upon by theory in a number of ways:

- Firstly, the terminology of observation is itself theory dependent via the very nomenclature itself, through to the concepts that define observables and the researcher's mental construct. All these factors have varying degrees of theory elements within them. For example, the everyday words that we use to describe colours are learned and are a theoretic construct. At a more detailed level, colour may be defined according to a particular mix of wavelength (in the region of 10^{-6} to 10^{-7} metres) and frequency (around 10^{12} kilocycles per second) of the electromagnetic spectrum. Clearly then, beyond a very basic level of description, the terminology that describes colours becomes highly conceptual. This example deals with an apparently obvious and common issue. It is

8. See Margenau, H. What is a Theory? In Staunton, J.J. (ed) *Theory Construction and Verification in Accounting*, Department of Accounting and Financial Management, University of New England, Armidale, New South Wales, Australia, 1976, p. 1-11.

9. Also see Feyerabend's comment, "... learning does not go from observation to theory but always involves both elements. Experience arises together with theoretical assumptions not before them ..." (Feyerabend, P.K. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London, 1975, p. 168).

not surprising that the problems of terminology (of observations) compound drastically when we attempt to deal with issues such as motivation or utility.

- Theory also interferes in the choice of observations. When carrying out experiments or observation in a field setting, the researcher makes a number of initial hypotheses as to the likely causal linkages and processes concerned with the particular problem. Only by making certain constraining assumptions concerning the likely driver-factors in the relationships being studied can the researcher define the problem such that adequate and feasible analysis is possible. Once the parameters have been defined and the variables considered, then the actual research may be undertaken. Obviously, all elements in the universe can not be considered for any particular experiment and the exclusion of factors itself requires a statement of theory or hypothesis, which preempts an objective and unbiased view of the variables which may be in play concerning a particular relationship.

Factors may be excluded from observation for a number of reasons, for example:

- * it is considered that they have no impact upon the hypothesised relationship under analysis,
 - * resources (both time and money) are limited,
 - * an item may not readily lend itself to being measured,
 - * it is held that items are too difficult to consider in appropriate detail thus leading to abstraction.
- Political and social constraints are frequently

encountered when undertaking research.¹⁰

- * it is often very difficult to know what in fact the variables are that should be considered. In particular, there is the problem of what one does not know and hence how to account for this unknown or undefined variable when undertaking scientific research from an inductive perspective.

Thus in undertaking research following the inductive approach large numbers of theory statements (explicit and more often implicit) are made concerning the observables, their definition and the parameters of the research. These are bound to influence and constrain the derived theory. Many of these theory-dependent exclusions are realistic and pragmatic responses to the complexity and numerousness of variables inherent in an area of study. However, this real-life necessity, which can be argued is true of most if not all areas of research, effectively undermines the distinction between the theory and observation domains.

On a more particular problem of observation, the measurement problem, there exist a number of very practical constraints. The primary constraint is that of accuracy. Many might consider that questions of measurement are relatively objective. However, observation conditions may vary continuously and widely over a wide range of circumstances and when this happens quality of theory is likely to be affected. Furthermore, in the everyday context of conducting research it is more common that measurement is inexact and that the researcher's own behaviour will impact on the research, thus affecting the outcome and ultimately, the research findings. Heisenberg⁽³⁰⁾ in his

10. Watts and Zimmerman have particularly noted this in their publication, *The Demand for and Supply of Accounting Theories: The Market for Excuses*. *The Accounting Review* v. 54(2), 1979, p. 273-305.

uncertainty principle pertaining to very large and very small observations, demonstrated that even in the physical sciences there is substantial measurement difficulty, to the extent that his work overthrew the structural-deterministic view of the universe so introducing quantum mechanics, predicting a number of possible outcomes and their probabilities. When one moves into the social sciences a host of additional problems become apparent which include notably the researcher's impact upon the research, clearly shown in the seminal research of the Hawthorne studies.¹¹ Arrington and Francis⁽³¹⁾ well sum up the problem of measurement/observation in the area of agency theory when they say that,

"To privilege contracts is just as vacuous as speaking of the behaviour of the firm... A 'nexus of contracts' no more 'behaves' than an organisation does; nor is it more 'observable' or less concerned with 'motives'."

In this case the 'observables' are contracts, both explicit and implicit, which are then to be observed, categorised and attributes measured. To writers such as Jensen the observables (contracts) are clearcut, but for Arrington and Francis they are a construct that is intangible and largely illusory - a view with which I concur. Further, the researcher's own perceptions are generally considered to impact upon the objectivity of the observable.

Even at a more basic level the questions of definition of terminology and how far one may pursue an area of definition before becoming absurd, at least from a perspective of practice, must be considered. For example, questions

11. Refer to discussion of research in Roethlisberger, F.J. and Dickson, W.J. *Management and the Worker*. Harvard University Press, Cambridge, Massachusetts, 1966.

of colour and tonal qualities defined by wavelength or character of wave form, are labelled differently according to culture such as the separation between blue and green moving through turquoise.^{12,13}

In accounting one encounters the particular problems of measuring factors of utility and value, which bring with them a host of personal value statements and prejudices. Utility questions¹⁴ and particularly value perception, are measured by some form of surrogate. In economics and accounting this is typically via a price surrogate. In other words, we use the market (public wide) price as a measure of worth or value to an individual. The price surrogate does not take account of excess demand function nor excess supply function. It makes heroic statements of *ceterus paribus* concerning the nature of the market, as well as a host of statements concerning pure and perfect competition. All these factors exist within a single time frame. However once longitudinal analysis is undertaken

12. For example, the Japanese word *ao* can mean blue as well as green and covers the generic colour of blue and green. In the Japanese language there are also specific words referring to green and blue, as Western society would understand them.

13. On the social dimension of evidence, Feyerabend talks of the "historico-physiological character of the evidence", such that observation does not exist independent from people. (Feyerabend, P.K. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London, 1975, p. 67).

14. Refer to Bentham, J. *A Fragment on Government and An Introduction to the Principles of Morals and Legislation*. Basil Blackwell, Oxford, 1960 Reprint, and for further reading, the works of Locke, James Mill and John Stuart Mill.

questions of preference may change dramatically.¹⁵ Thus making utility and market surrogate arguments difficult to maintain. Hence at the practical level of measuring observables, there exist substantial constraints on the use of the method particularly within the social sciences, but also within the natural sciences.

It could be argued that the problems identified here are problems of practice not of theory, but that is an untenable criticism since problems of the theory and observation distinction are fundamental to theorising and not merely to practice. By way of a parallel, the philosophy of science is concerned with the methodology of science. It is not an abstract area given over purely to discussion for the sake of it. It is derived specifically from the undertaking of research and the discussion of the nature of the method and the methodology of that research. Practical aspects of undertaking research, when they become substantial, are just as significant when considering the way in which science is pursued as the theory questions such as the legitimacy of induction.

Other Problems of Induction

Induction is the fundamental tenet of the received view

15. The market determination of value further assumes an equilibrating system. However some have argued (refer Culbertson, J.M. *Macroeconomic Theory and Stabilisation Policy*. McGraw-Hill, New York, 1968) that the marketplace may at certain times take on the characteristics of dynamic disequilibrium. If so, then the arguments for marketplace determination of value become heroic at best leaving the historic cost convention as little more than ritual. Accountants have generally felt that the marketplace does provide a reasonable indication of value and worth (albeit a crude measure) but perhaps this is too grand an assumption. Such reasoning led Chambers for example to advocate an alternate measure of a firm's position, one based on cash equivalents making no statement about future earnings or value to the firm within a going concern context.

(what is commonly labelled the scientific method) providing the linkage between observation and statements concerning reality. If induction can not be legitimised then the entire basis of the received view is undermined. The fundamental problem of induction is its lack of justification via any appeal to logic.¹⁶ The only way in which induction has been able to be justified to date is by such reasoning as,

In the past experiments have used the inductive approach. These experiments have generated theory which has been a good explanation of events. Since we can observe large numbers of experiments that have led to sound theory, we can therefore say that induction is justified.

This reasoning is tautological since it involves the use of induction to justify itself.

An alternative justification is to resort to belief or faith and this follows something like,

It appears eminently sensible that induction is the appropriate linkage between observation and theory. We have used it extensively and any knowledgeable person would believe that induction is the right approach.

16. This is often called the problem of Hume and reaches to the heart of the received view itself. (Refer Hume, D. *A Treatise of Human Nature*. Clarendon Press, Oxford, 1740, Book i pt iii Section vi, and also Keynes, J.M. and Sraffa, P. *An Abstract of a Treatise of Human Nature*, 1740. A Pamphlet Hitherto Unknown by D. Hume (1938). Reprinted by Archan Books, Connecticut, 1965, p. 15.) A number of inductive essays are contained in Foster, M. and Martin, M. (ed) *Probability, Confirmation and Simplicity*. Odyssey, New York, 1966 which clearly articulates the many principal arguments.

This justification by faith is unacceptable,¹⁷ since metaphysical statements are not permissible within either logical positivism or the received view.⁽³²⁾ Thus resorting to faith as justification can be excluded due to the logic and parameters of logical positivism and the received view themselves. Thus there has yet to be an explanation of induction which will be logically consistent and acceptable to those within the philosophy of science area and until there is, the use of induction can not be justified via internal logic explanation.¹⁸

A further problem with induction relates to the validity of a premise but the falsity of a conclusion. For example, it can be observed that large numbers of sheep are white leading to a universal statement that sheep are white. Then a black sheep is observed. The observation of the black sheep nullifies the conclusion although valid inferences were made from the large number of white sheep observations. This is a consequence of not viewing all *n* sheep and of probability, but also implies a wider problem of time frame - although all elements of a population might be observed at a certain time and a conclusion drawn for that time, no prediction can be made since once a different temporal frame is entered then all factors and

17. Yet eminent people have resorted to very similar claims. For example, Reichenbach states that "the principle of induction is unreservedly accepted by the whole of science and that no man can seriously doubt this principle in everyday life either". (Reichenbach, H. *Erkenntnis* I, 1930, p. 67. In Popper, K.R. *The Logic of Scientific Discovery*. Hutchinson, London, (revised) 1972, p. 29)

18. The term internal logic refers here to the justification for induction within the accepted parameters of the received view. It does not refer to the rational decision by a person to use an inductive approach to problem-solving if this approach is the best way of coping with a particular problem. This separates the logic of the method from the logic of acceptance; here we are concerned with the logic of the method.

parameters are subject to change.

In this regard, Yu⁽³³⁾ says,

"the observation of sufficient instances will give us a degree of assurance. Although premises or hypotheses may be proposed under an inductive system, there is no such requirement and logical correspondence between the premises and conclusions."

Probability theory has been suggested as a method of dealing with these problems. However no matter how numerous the observations, there will always be an infinite number of possible observations through time under an infinite number of parameters, resulting in a probability of zero. Only in a situation of a single temporal setting and given strict parameters for the experiment, can a clear probabilistic statement be made. In particular, once the temporal factor is released, then all parameters are subject to variability and immediately the sum of the possible outcomes becomes infinite. Thus only through abstraction and statements of non-variability can probabilistic statements be made.

If one is left without logical justification of induction, ways to circumvent the conundrum should be considered. These may either be via alternative approaches such as falsification, or via the logic of acceptance, which is considered now.

It has been argued that there is no justification for induction *per se* and hence none for the scientific approach. However there can be justification for the use of the method if it is the most effective way of dealing with a particular problem in a particular situation. In other words, people must deal with situations and resolve problems - decisions have to be made. If induction as a method

is the best way of dealing with a particular situation, notwithstanding its lack of methodological support, then its use might be justified on grounds of effort, energy and the need to cope. However, the legitimacy of the use decision does not confer methodological legitimacy.

To argue the use of the scientific approach on grounds of situation-appropriateness is to acknowledge the complexities of our environment and research reality. If the use of a particular technique enables understanding to progress then the use of the method can be argued as rational, even while the method or mechanism for allowing that progression of awareness is not itself logical. This line of reasoning, however, places so much emphasis on the pragmatics of practice that theory may well become neglected. I believe that the interaction between theory and practice can not be realistically ignored to this extent and that methodological considerations are too important to be sidelined, merely because of the current difficulty in justification.

On Induction, Correlation and Causality

Yu⁽³⁴⁾ cites further problems of induction when he argues that there is no necessary linkage between the premises and the observables and the conclusion. Thus whether there exists a causal linkage is open to question. Causality is one of the underpinnings of the scientific approach - the presumption that because certain events take place other events will correspondingly follow, is the basis of induction-derived theory. Yet the logic that a certain event will lead to another event must be demonstrated by separate logic and discussion quite apart from what eventuates

from the inductive process itself.¹⁹ Numerous cases (particularly in the finance area)²⁰ may be cited demonstrating the use of inductively derived theory from empirical data. These cases demonstrate how theory was developed as a result of changing patterns in observables, yet the theory although fitting the observed 'facts' may be argued to be lacking in process since much of the cited research emphasises statistically derived inference. Henderson and Peirson⁽³⁵⁾ express the view²¹ that,

"empirical theories describe relationships but offer no explanations for these relationships."

Thus in using the inductive approach, the researcher must adequately formulate the linkages and processes involved, demonstrating the logic for those linkages and processes, since without the justification for the relationship, induction may demonstrate nothing more than correlation.

This particular confusion of correlation with causality is becoming increasingly common with the advent of user-friendly statistical packages and large databases, partic-

19. On this, Hume's comments are revealing, "... that Adam, with all his science, would never have been able to demonstrate that the course of nature must continue uniformly the same." (Keynes, J.M. and Sraffa, P. op.cit. p.15)

20. Watts and Zimmerman deal with inductively (positively) derived theory and use extensive finance cases of research to support their advocacy of positive accounting theory. (Watts, R.L. and Zimmerman, J.L. *Positive Accounting Theory*. Prentice Hall, Englewood Cliffs, New Jersey, 1986).

21. Henderson and Peirson are using empiricism here in a restrictive sense to say that data gathered without interpretation merely 'map' relationships. Concomitantly it is the human interpretation of the relationship that provides explanation. In general terms, empiricism may be seen as a belief that knowledge is based on experience and a general rejection of metaphysics.

ularly in the area of economics and finance. It is now easy to draw upon huge amounts of data, complete statistical analyses of these databases in a search for relationships between variables. The resultant establishment of measures of the degree of relationship appears, on the surface, to give strong support to the notion that one particular variable, or group of variables, defines changes in latter variables. Yet this approach does no more than describe a series of changes and in no way demonstrates causality. The down-side of this approach, which is strongly inductive, is that the nature of the relationship between variables is sublimated by the concentration on statistical and empirical relationship. Thus theorising is being moved aside by descriptive, statistical statement - perhaps this is logical positivism come full circle. Logical positivism grew out of the belief in structure and mechanistic relationships in the late 1800's. There are indications that we are now replacing the mechanical models of the 1800's and early 1900's with the computer software of today, but as a surrogate for theorising.

A final criticism of induction is raised by Gray *et al* when they argue that an inductive approach is myopic in that it considers only that which is, and by definition, does not consider that which is not.⁽³⁶⁾ This is of course the justification for the deductive approach where the researcher reaches out with new ideas to test them in practice.

Issues such as 'how might a relationship change given changes in certain parameters' and other 'what if ...' questions are the essence of responding to and planning for change. However the inductive approach merely deals with these aspects via reliance upon the past.

Deduction

Whereas the received view concentrated on the manner in which theory was derived (that is, via observation and induction) and acceptable and non-acceptable methodologies, the deductive approach is concerned primarily with prediction and to a much lesser extent with the manner in which theory is derived. Certain writers have established criteria by which to evaluate the legitimacy of theory⁽³⁷⁾ with the emphasis being on the evaluation, and scant attention given to how the theory may have been derived in the first place. Thus the deductive approach equally accepts a statement of hypothesis originating from a flash of insight as from a logical progression of working in an area for a significant time. No matter which, the emphasis is on prediction, and whether the predictions fit with observables.

In the mid 1950's and early 1960's there was a lack of clear differentiation in accounting between the traditional scientific approach (the basis of which is the received view) and the place of deduction. Thus writers of this period^{(38), (39), (40)} sometimes used these two notions interchangeably and at other times, separately. As the scientific method was explored further and discussion developed, so a clearer distinction of the two emerged which is evident in the writings from the early 1960's onwards.

Following the call for a more rigorous and scientific approach in the late 1950's many writers in accounting theory adopted a deductive approach (also called deducto-normative) in the late 1950's and 1960's with the classic deducto-normative work of the period being Chambers' *Continuously Contemporary Accounting*.⁽⁴¹⁾ Nelson⁽⁴²⁾ described the time as a great period of a *priori* research.

This shift to deduction and normativism²² is a credible progression in a social science area where the practice of the discipline is the basis for much of the observation. Consequently improvements in practice do not readily result from theory unless the theory postulates previously unrecognised relationships. To do this, theory must be more deductive and normative to escape the trap of an overly descriptive function which was prevalent in the 1930's and 1940's within accounting.

It must be recognised that these comments apply mainly to financial accounting and management accounting, where the discipline was heavily concerned with the practice of undertaking the various accounting functions. However, in the newer area of finance there has been a significant use of inductively-based research which has provided a strong understanding of the environment and the way in which it operates.²³ It must be added however that several classic works, including Miller and Modigliani⁽⁴³⁾, and more recently Jensen and Mekling's⁽⁴⁴⁾ work on agency theory

22. Keynes, J.M. states "a normative or regulative science ... a body of systematised knowledge discussing criteria of what ought to be ...". (In Friedman, M. *Essays in Positive Economics*. The University of Chicago Press, Chicago, 1953, p. 3).

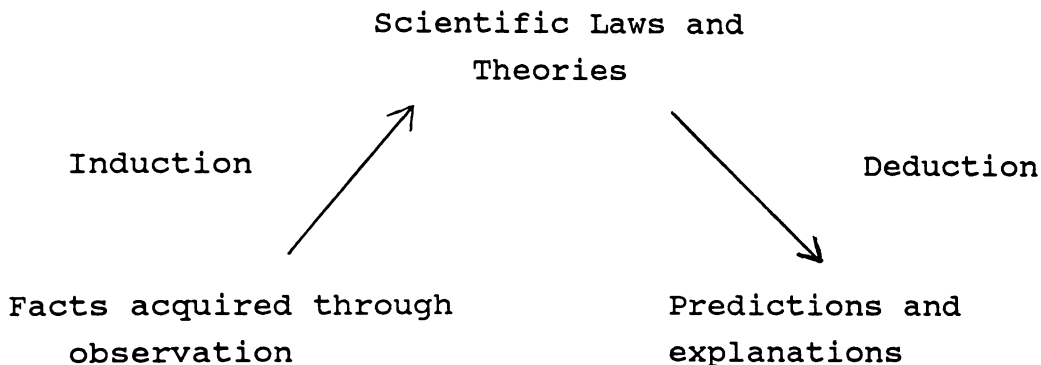
23. In this area in particular, the object of the investigation is separate in many respects from the accounting profession itself. For example, while accountants have a contributory effect on the performance of the stock market, it is viewed as largely separate from the profession, when considered from the view of finance persons and especially more recently in light of the efficient market hypothesis (see Fama, E.F. *Efficient Capital Markets: A Review of Theory and Empirical Work. Journal of Finance* May 1970, p. 383-417). Here we do have an observation plane which is relatively separate from the actors (accountants). However, this is clearly not the case in the situation of annual account preparation which is undertaken by accountants themselves, the process of which is difficult to observe in any objective fashion and is of course undertaken by the observing group.

are substantially deductive.

Thus substantial writing in the 1960's to the present, particularly in the area of financial accounting and management accounting²⁴, followed the deductive approach, that is⁽⁴⁵⁾,

"the process of deducing from something known or assumed; specifically in Logic, inference by reasoning from generals to particulars."

The relationship between observables, theory, induction and deduction can be summarised after Chalmers⁽⁴⁶⁾:



There is here an important difference in emphasis to that which Yu outlined, since Chalmers focuses on the derivation of structure (scientific laws and theories) before the testing (deduction). The derivation of theory from observables is seen as the key to the received view and the later testing as secondary. Clearly the process is

24. The work of Chambers has already been mentioned as a seminal work in the deducto-normative mould. Other work in a deductive approach includes the conceptual framework debate, specifically as to the objectives of accounting; recent work on the auditing conceptual framework again highlights the *a priori* approach; and in management accounting, we see a reappraisal currently underway concerning the nature of management accounting (see Choudhury, N. In Search of Relevance in Management Accounting Research. *Accounting and Business Research* Winter 1986, p. 21-31).

iterative (as per Yu) but the essential element is the inductively derived theory.

Thus the right hand side of the diagram shows the deduction from hypothesis and theory to explicit predictions which are then compared with observables; the left hand side is essentially the received view which shows the acquiring of facts through observation and the inducing of theory based upon these. In practice the two approaches must be seen as complementary (refer earlier discussion) and not as alternatives, however they must also be viewed as different emphases in the approach to a problem. For example, some research may be best approached by a strongly empirical and quantitative technique based largely within the received view methodology. Other areas may be best suited to an approach which is largely deductive, such as research areas having scant information and where novel and possibly radical problems are emerging.

The period of the 1960's, described by Nelson⁽⁴⁷⁾ as the great period of *a priori* research (or research proceeding from basic assumptions), saw in accounting an outpouring of hypotheses. In some ways the 1960's may be seen as the golden age of *a priori* reasoning in accounting. No other period has probably seen such an outpouring of theory and postulation, much of which was without empirical support and certainly, when viewed in perspective against the previous history of accounting, the writers of this period were indeed revolutionary.

The Deducto-Normative Approach

The basis for the deducto-normative approach is a statement of goals and objectives and basic relationships concerning the issue under study. Following these general goals are the postulates concerning the area under study which are the key to the approach. These propositions or

postulates may be either, of a mathematical context when they are frequently referred to as axioms⁽⁴⁸⁾, or, statements that must be either accepted or not accepted (in other words, they must be taken in good faith as a basic assumption or a *a priori*). The starting point in common nomenclature is typically postulates, and these will generally have certain characteristics which Yu⁽⁴⁹⁾ summarises as follows:

- "(1) *Coherence* - it shall belong to the system and must cohere with the rest;
- (2) *Contributiveness* - it shall imply further propositions of the system;
- (3) *Consistency* - it shall not contradict any other postulates of the system;
- (4) *Independence* - it shall not itself be implied by other postulates of the system."

After establishing the postulates, further definition will take place to define parameters of the area including concepts and definitions. However it is the framework of the approach that determines the internal consistency of the theory. One framework which has become a working model (via the widespread use of this theory test) has been suggested by Hendriksen.

Hendriksen⁽⁵⁰⁾ sees the development of the deductive approach in a number of stages,

- "(1) The formulation of general or specific objectives of financial reporting;
- (2) A statement of the postulates of accounting concerning the economic, political and sociological environment in which accounting must operate;
- (3) A set of constraints to guide the reasoning process;
- (4) A structure, set of symbols, or framework, in which ideas can be expressed and summarised;
- (5) The development of a set of defini-

tions;

- (6) The formulation of principles or generalised statements of policy derived by the process of logic;
- (7) The application of the principles to specific situations and the establishment of procedural methods and rules."

These stages are significant for a number of reasons.

- The determination of the objectives of the work is fundamental as an alternative objective is likely to lead to an alternative structure and thus an alternative outcome. This can be illustrated in the work of the early 1960's on price-level changes and their accounting procedures. Several authors held different objectives concerning the purpose of accounting; some saw the objective as preparing as fair a picture of the current value of the business as possible; others held that the objective was to provide information for the investor; while others saw the purpose of accounts issue as justification for the restructuring of financial accounting (Mattessich), and yet others (Chambers) took the debate further and considered that an entirely new objective of income measuring was required, that of adaptive capacity. These alternative objectives for the same action meant that the derivations from the deductive process were quite different.

This first statement by Hendriksen of setting objectives is a critical phase but one which has not been given sufficient consideration by accounting writers. Many writers have not adequately considered the nature of objectives, their limitations and implied assumptions and their applicability to the situation at hand. Too frequently the discussion has concerned the results and techniques of the approach rather than initially debating the early statements of a

priori. Yet deduction implies the statement of objectives as the key element of the process. To not debate in detail the implications and nature of the objectives is to leave the cornerstone largely untouched.

- The next stage of explicitly stating the postulates has often been overlooked. In some cases postulates have been so generally stated that the analysis has been virtually untestable. With inadequate postulates numerous structures could be derived resulting in a lack of consistency and generally, an inadequate definition of theory.
- Hendriksen's third concern is that the symbols and working structure be carefully defined in order to provide a clear, unambiguous means of communication. For example, statements of value, of assets, the nature of assets, and classification thereof, questions of liability, executory contracts, questions of income definition, all need careful definition. Yet there has often been a lack of definition in accounting of basic items such as assets or liabilities.²⁵ Accordingly, there have been ambiguous predictions and unclear outcomes from the deductive process.

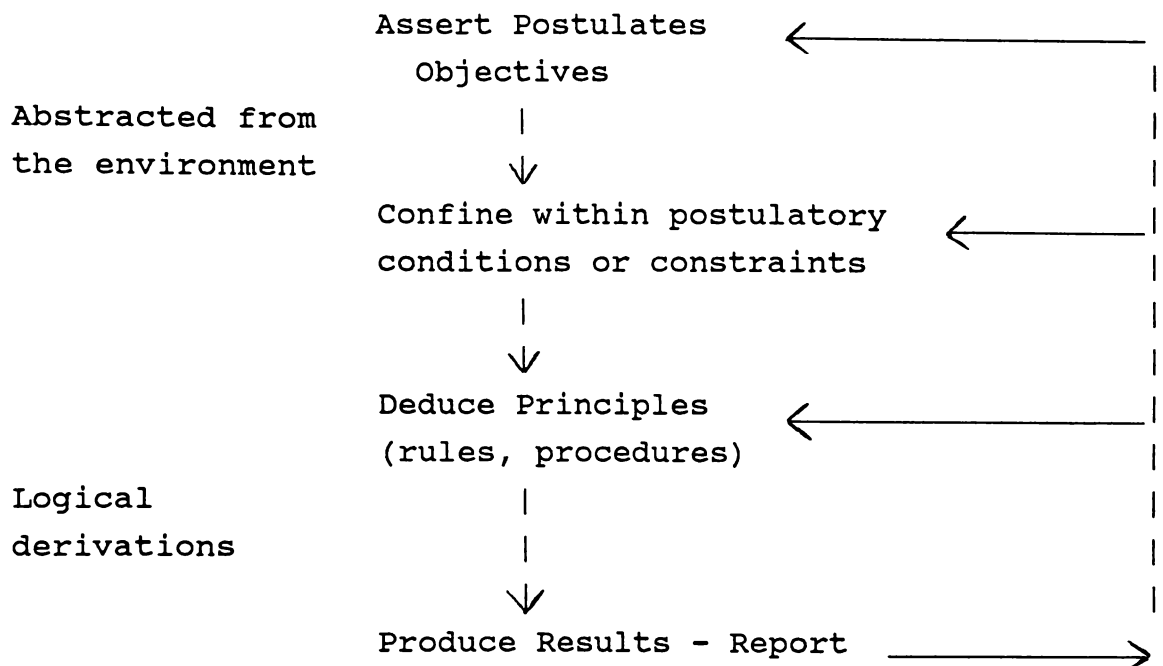
It was partly due to this lack of clarity in the deductive

25. This lack of definition of fundamental concepts such as assets and liabilities may be evidenced in the time taken to adequately deal with Hire Purchase and Executory Contracts. If these terms had clearer definitions rather than the typical listing of asset types, then accountants might better have dealt with problems of new sorts of contracts. It is not some obscure notion or element of accounting being debated but two of the most basic concepts, assets and liabilities. The New Zealand Society of Accountants is at present revisiting these issues as it produces its conceptual statement.

process that Mattessich⁽⁵¹⁾, in particular, adopted an axiomatic or mathematic approach for the purpose of better defining and elaborating the various levels of theory construction. This made it possible to more clearly derive discrete results from the process. The axiomatic approach defines the postulates, structure, symbols, framework, definitions and all subsequent statements in mathematical expressions, typically utilising matrix algebra or symbolic logic. It enables the results to be tested therefore through mathematical means. Ideally, this approach allows for rigorous use and testing of the deductive approach, however the problem of defining the various terms remains. The acceptability of those definitions, including those for objectives and postulates (in other words, at the highest level), is often restrained. Unless acceptance can be gained for these basic statements, whether they be in mathematical symbols or language terms, then the results will always be subject to debate. This is one of the most difficult problems facing theory construction in accounting - the universal acceptance of common definitions and criteria for everyday events and characteristics in the business world. Since the nature of an asset changes from one environment to another, from one legal system to another, and from one individual's perception to another, it is difficult to derive any universal and acceptable statement of terminology. This problem of definition had been partly addressed by such earlier writers as Gilman⁽⁵²⁾, Sanders, Hatfield and Moore⁽⁵³⁾ in the 1930's and 1940's and although generally accepted definitions of key items were derived they tended to be descriptive of then current practice rather than considering underlying issues and concepts.²⁶

26. I contend that this indeterminacy in definition arises largely from the nature of the issues themselves and the limited theorising that had taken place at that time. Absolute definitions are impossible due to the social and

Buckley et al⁽⁵⁴⁾ put forward an alternative view of the deductive approach as applied in accounting:



This incorporates the upward feedback process and enables the overriding statements of objectives and postulates to be modified in accordance with further refinements at lower levels. In practice this is sound, provided the modifications take place within the principal understanding of the initial thrust of the research. It is also necessary that the modifications merely elaborate and clarify certain aspects of objectives and postulates. If

...Continued...

changing nature of issues dealt with in accounting. We have the choice of using either generalised statements or abstracted precise statements, each of which is not ideal. The only way around the problem is to consider the generalised statement and from that, derive key definitional criteria in much the way that Canning did (Canning, J.B. *The Economics of Accountancy*. Ronald Press Co, New York, 1929). However this approach tends to be conceptual and may give little help to practitioners dealing with day to day problems of practice.

the clarification and feedback process threatens to change the fundamental nature of postulates and objectives then the entire analysis needs to be reformulated. The importance of including feedback is that it allows in a clear and explicit sense for the practice of the research undertaking. It enables ongoing refinement and enlargement of an articulating theory structure.

Deduction may be seen as the logical extension of induction, that is, the prediction based upon inductive theory. But it may also be seen as a free standing process beginning with bold statements about the world and leading to specific prediction. It is this latter deductive focus which has been extended towards statements of what should or ought to be, that is, the deducto-normative approach.

Towards Normativism

The communication of economic information to permit informed decisions (American Accounting Association, 1966) is still widely held as the basic purpose of accounting. While much theorising and research has been concerned with the description of what has actually been taking place (positive accounting theory), there has been a move towards discussing what constitutes good accounting theory and the direction in which accounting should be headed. The swing towards normative theory had a number of causes which included:

- firstly, the recognition that accountants were achieving little by discussing the current state of accounting, when the current state was what accountants did; and
- secondly, the awareness by many writers that accountants had to be more forward looking and had to deal with changes in a more progressive fashion.

Thus it was felt that a much more prescriptive approach

was necessary to guide theorising which would in turn provide structures appropriate for dealing with forthcoming circumstances and original problems. McDonald⁽⁵⁵⁾ suggests that normative theories are concerned with what the structure of accounting ought to be and describes them as theories for accounting.

The normative and deductive approaches are similar although distinctly different. Deduction merely refers to the process of prediction from theory and hypothesis. This can concern the existing accounting position or it can concern future direction. The normative approach is a particular subset of the deductive approach whereby the latter is treated in an active fashion and considered to relate to what should be, what is better practice, or where we wish to go. Hence the normative treatment of the deductive approach may be referred to as the deducto-normative process.²⁷

The deducto-normative approach is particularly strong and widely used in accounting.⁽⁵⁶⁾ Just as the deductive approach requires the initial statement of objectives and then postulates, so a normative approach requires well-defined objectives, proceeding through the deduction process to individual predictions of outcomes. This normative use of the deductive approach has had significant impact on accounting theory formulation, possibly more so than the deductive approach by itself.

The Development in Accounting of the Deducto-Normative Approach

The first clear use of this approach can be seen as early as 1907 when Sprague⁽⁵⁷⁾ attempted to establish accounting

27. Often the normative and deductive terms are used interchangeably although incorrectly.

principles supporting the view that accounting was,

"a branch of mathematical and classificatory science, the principles of accounting may be determined by a priori reasoning ..."

Sprague was arguing for a deductive consideration of accounting principles and postulates that would lead to a more logical and codified basis for the practice of accounting. This is both deductive and normative in its perspective. Up until this time, accounting had been almost entirely driven by practice. It was only around the turn of the century that accounting programmes were offered in universities, accounting texts were written and that early accounting journals were being established. Thus the period was the beginning of the modern era of accounting and the development of programmes in universities laid the foundation for the future intellectual growth within the discipline.

In 1922 Paton⁽⁵⁸⁾ pursued Sprague's ideas and proposed that more fundamental postulates were necessary as a basis for accounting practice. Paton undertook work considering the basis of accounting and the premises on which accounting practice was constructed, as well as considering premises upon which it should be based. These two writers are distinctive in that they focussed on a deducto-normative perspective in a period when most others were concerned solely with the establishment of codified practice. By contrast, Sprague and Paton were calling for statements of principle and postulates which could encourage theorising and theoretic consideration in accounting and which in time would lead to a stronger theoretic foundation for the discipline as a whole. Though their work was progressive and forward looking it did not at that time give rise to a new direction and focus for accounting writers.

In 1928 Hatfield⁽⁵⁹⁾ launched a stinging attack on the nature of accounting and the way in which it was carried out. He was highly critical of the lack of theory and justification stating, as quoted by Chambers,

"in argument and practice accountants are 'illogical, inconsistent and vacillating'; that they 'rely on reiteration in lieu of argument'."

Hatfield considered that the use of terminology in a relatively indiscriminate fashion without definition and in some cases, without justification, was one of the major shortcomings of accounting at the time.

In the following year, the economist Canning was even more scathing concerning the lack of theory and logical structure within the accounting discipline. He said⁽⁶⁰⁾,

"the accountants have no complete philosophical system of thought about income nor is there any evidence that they have ever felt the need for one."

Canning argued that there was little theoretic structure in accounting and he criticised the dominance of practice and pragmatics over theory. He advocated a deductive, *a priori* based theory. It is interesting to note that Canning's work in the interface between accounting and economics and in particular in the area of assets is still widely referenced today in accounting.

The 1950's and 1960's saw a burgeoning interest in the nature of accounting theory - the need for theory, the need for a framework and objectives of accounting, and the need for research. Out of this period, the deducto-normative approach developed.

Chambers' Early Work - A Watershed

One of the writers having the greatest impact on the move

to theory in accounting and on the need to establish a logical basis for practice was Chambers. He argued that the profession needed⁽⁶¹⁾,

"to distinguish between systems of rules relating to the practice of accounting and a theory of accounting."

Chambers acknowledged the inter-relationship between inductive and deductive reasoning, although he did call for a scientific approach, implying an inductive perspective. However he also advocated the establishment of theory built upon assumptions, statements of a *priori* or basic axioms and propositions. This call for a much broader, objectives-based theory in accounting came at a propitious moment as many appeared to be ready for such a move; his propositions were generally well received despite substantial debate between himself and Littleton.²⁸ He also argued that the basis for a theory of accounting lay somewhat outside the accepted role and bounds of accounting, and in particular, suggested four premises for a theory of accounting⁽⁶²⁾:

- "(i) certain organised activities are carried out by entities which exist by the will or with the cooperation of contributing parties;
- (ii) these entities are managed rationally, that is, with a view to meeting the demands of the contributing parties efficiently;
- (iii) statements in monetary terms of the transactions and relationships of the entity are one means of facilitating rational management; and
- (iv) the derivation of such statements is a service function."

28. Refer to Littleton, A.C. Choice Among Alternatives. *Accounting Review*, v. 31, July 1956, p. 363-370 and Chambers, R.J. Blueprint for a Theory of Accounting. *Accounting Research* v. 6(1), 1955, p. 17-25.

The importance of Chambers' work is enormous as it espoused a methodology to consider the development of accounting theory in advocating the use of both the traditional scientific approach as well as the deductive or normative approach. Initially Chambers did not work in detail concerning the nature of theory but with processes that should be followed in the derivation of theory. Thus he devoted attention to the promulgation of theory in accounting itself, holding to the view that accountants need theory to guide practice and that for practice to be logical and codified it must have a theoretic underpinning.

Chambers' work of the late 1950's was also significant in that it laid the groundwork for subsequent work in the 1960's concerning both scientific approaches and deductive research.

The 1960's saw the deducto-normative approach to theory formulation flourish. The American Institute of Certified Public Accountants (AICPA) in the early 1960's produced Accounting Research Study (ARS) No. 1, *The Basic Postulates of Accounting* and later Accounting Research Study No. 3, *A Tentative Set of Broad Accounting Principles for Business Enterprises*. These works, produced by the primary professional accounting body in the United States, represented major theoretical contributions by a professional body and they were a significant departure from the earlier traditional, largely descriptive writings. The initial work by Moonitz adopted a broad approach to the question of postulates for accounting rather than attempting to deal with detail. As a result it attracted significant criticism for its lack of detail; the criticisms themselves can be attacked however for lacking an appreciation of the importance of establishing basic postulates within an *a priori* based approach. Moonitz' postulates covered

the three basic areas of environmental factors, the field covered by the theory, and thirdly, an area labelled imperatives, which were akin to key elements guiding the production of financial statements.

From the criticisms of ARS No. 1, ARS No. 3 was produced concentrating on principles that could practically guide the production of financial statements. These principles were at a much more pragmatic level than the earlier postulates. However, ARS No. 3 was not able to be logically derived from, nor did it follow directly from, ARS No. 1. The ARS No. 3 principles had more affinity to assertions than elements which extend and interpret general theory. Accounting Research Study No. 3 also attracted severe criticism. Its attempt to introduce current valuation methods into financial accounting was not supported. Together both works were criticised for their tendency to represent the opinions of an individual without adequate support by logical argument. These shortcomings, particularly the assertion-like principles that were formulated, were common to much of the work of the 1960's.

In 1961, Edwards and Bell⁽⁶³⁾ produced work that closely followed the deductive approach from objectives through to specific testable examples. The work was tied in a specific fashion to the derivation, definition and measurement of business income. They considered the objectives of accounting to be:

- (1) to provide useful information for evaluation of past business decisions; and
- (2) to provide data for a sound and equitable basis for taxation.

It should be noted that Edwards and Bell make no statement concerning the future performance of the business since in their view this is beyond the scope of accounting or, at

least, the scope of financial accounting information. However they recognised that no single concept of profit would cover all users' needs and hence they proposed a concept of income based on several components which could be brought together to produce various profit measures depending upon the objective(s) of the user. This work was one of the clearest expositions of the deductive approach being applied in a coherent and logical fashion, from the statement of objectives through to the derivation of examples that could actually be tested. By circumscribing their work to specific areas of income recognition and reporting, Edwards and Bell were able to formulate a workable, cogent theory of income and its measurement.

In 1966, Chambers presented one of the most important pieces of deductive work, *Accounting, Evaluation and Economic Behavior*⁽⁶⁴⁾. He considered the nature and application of the accounting function, the objectives of accounting, and the accounting environment. In this work, he developed an alternative accounting model which he argued was internally consistent and based upon a number of postulates and definitions. He called this model, Continuously Contemporary Accounting (CoCoA).

He developed a number of postulates from which detailed definitions and statements of relationship were derived. For example, in Chapter 1 entitled "Individual Thought and Action", he critically considers such notions as sensation, perception, and reasoning since these form the basis of decision making. He follows this with environmental consideration through to detail on the nature of money measurement, valuation and particular accounting issues. In other words, he clearly follows the deductive process.

Chambers argued that the derivation of current cash equivalents (CCEs) should be used for reporting, both internal-

ly and externally, the position and potential of an enterprise. Chambers then went on to formulate a number of exemplars (in the Kuhnian sense⁽⁶⁵⁾) and spent a number of years refining and developing his CoCoA model. The development of this model involved both tighter definition of postulates as well as the development of practical issues concerning the workings of the model. McDonald⁽⁶⁶⁾ commented that:

"of all the theories for accounting, Chambers' is the most explicit in specifying the methodology adopted and in the detailed exposition of the analysis."

Of the normative theories developed during the 1960's, Chambers' theorising was certainly the most articulating and comprehensive, encompassing as it did management accounting and financial accounting perspectives. Criticism is better directed at the higher *a priori* levels, namely the statement of objectives and the statement of postulates and definitions. In the first instance, as with all deducto-normative theories, the overriding assumptions, in this case, the assumption of changes in adaptive capacity as the measure of business performance, must be either accepted or rejected by a reader. Secondly, with the benefit of hindsight, one is able to criticise the use of postulates and definitions as Chambers does not clearly separate the two. Mattessich⁽⁶⁷⁾ in particular takes this view when he says,

"Chambers presents a vast number of postulates and definitions without clearly indicating which are which. The processes of inductive inferences leading to the postulates and of the deductive inferences leading to the many theorems thereby presented, cannot be traced by the reader."

The strength and importance of Chambers' work is in his statement of objectives and the final development of clear models and examples that allow one to test the model in

practice. Chambers' CoCoA is the best example of the deducto-normative approach in accounting and is especially significant given its wide applicability.

At the same time, Chambers' model is controversial in that it recommends the current cash equivalents measure of business performance and this lacks conformity with accepted models. The impact of his work is that an alternative model was developed via the deducto-normative method providing a cohesive coverage of numerous areas in accounting.

Deducto-Normative Conclusion

Chambers' work is a worthy conclusion for this deducto-normative section as in the first place he led the call for a more scientific approach, and a decade later produced the most comprehensive deducto-normative theory of accounting. His work highlights the nature of the deducto-normative approach as it forces the reader to either,

- accept the objectives and principles of the theory, follow the reasoning and, presuming the internal logic to exist, so accept the results,
- or,
- reject the objectives and hence all following matters.

However, Chambers CoCoA is not typical of the work of the 1950's and 1960's. This period was characterised by work which loosely followed a deductive process but which allowed little testability of the premises via the refinement of the premises and postulates into a form which is applicable in practice. Thus little work was undertaken to link the various levels of the theory in a logical and singular fashion in order to provide internal consistency for the theory.

The problems of the deducto-normative writings may be

generalised as evidencing method without methodology, in that an approach (deducto-normative) was used without adequate realisation of the need for replicatibility and hence for falsifiability and confirmation. It needed a recourse to the philosophy of science area, and in particular to Popper, to enable the methodology of the deducto-normative approach to be more fully realised and used in accounting.

Induction Circumvented - Popper

Popper's work on falsification within the philosophy of science area was a direct result of the discrediting of logical positivism and the received view and had much to do with their overthrow. Popper argued for an approach that avoided the use of induction²⁹ via concentration on deduction and particularly prediction, constrained by the requirement that a theory fulfill certain criteria.

The Ideas of Popper

Popper was one of the most influential critics of the received view and logical positivism. Popper began writing in the 1920's and 1930's when logical positivism was at its zenith and continued writing through to the 1970's. Thus, his writings span the periods of both the height of popularity of logical positivism through to the time of its decline, and through to the era which saw the emergence of alternative schools of thought. As a consequence of the criticism of logical positivism and the received view, Popper introduced the notion of falsifiability and confirmation within the deductive framework.(68)

29. In fact, Popper argues, "Now in my view there is no such thing as induction. Thus inference to theories from singular statements which are verified by experience (whatever that may mean) is logically inadmissible." Popper, K.R. *The Logic of Scientific Discovery*. Hutchinson, London, (revised) 1972, p. 40.

Popper, in his approach to problem-solving, was more concerned with problems of the moment, than philosophical speculation for its own sake. In fact, he saw substantive problems with the philosophy of science as lacking linkages outside philosophy, and he argued that a weak linkage between philosophy and the everyday world of the scientist would undermine the philosophy of science area. In line with this pragmatic approach, Popper held that the position of a researcher should be stated as clearly and simply as possible, avoiding excessive and extravagant terminology, and coming as rapidly as possible to the nub of the issue under discussion.⁽⁶⁹⁾ This view was relatively novel and contrasted with those who held strongly to the opinion that speculation and philosophical discussion could often be more important than the issue itself.³⁰

The thrust of Popper's work was the growth of knowledge and within that, the fundamental tenet was the falsifiability of theory (read also knowledge). He considered that all knowledge was fallible including those statements that appeared to be obviously justified by observation at a very close one-to-one situation. He argued that the observation-inductive linkage does not provide the basis on which theory/knowledge can be derived or built, and thus no theory may be said to be true following a resort to observation. Thus Popper accepted, and in fact enunciated, many of the problems of positivism concerning the nature of theory and observation. He also recognised the problems in the inductive linkage between observation and theory as real limitations. Thus Popper rejected the positivist approach and the emphasis that had been placed on observation,⁽⁷⁰⁾ and in particular, he rejected the place of

30. Refer to Popper, K.R. *The Logic of Scientific Discovery*. Hutchinson, London, (revised) 1972, Preface to the First English Edition, 1959, p. 15-23, concerning language analysis.

induction in the derivation of theory.⁽⁷¹⁾ In place of these, Popper introduced the falsificationist viewpoint whereby the principal direction of research should be the discovering of shortcomings in theory and the falsifying of theory. Thus the role of the researcher is that of refutation or falsification, and not confirmation or proof.⁽⁷²⁾

The Development of Theory - or the uncovering of knowledge

The development of theory as described by Popper fits well with the deducto-normative developments in accounting and for that reason the parallels between the Popperian methodology and accounting are important. Popper argues that developments in knowledge occurring via scientific exploration start with a problem and not with observation *per se*. The problem may be a novel, unresolved situation not explained by earlier theory or it could be an identifiable shortcoming in an existing theory. As a result, there will be a formulation by scientists of new theories (conjectures) to explain the situation. These conjectures will then be extensively criticised by the scientist via experimentation and observation in an attempt to falsify the conjecture. When a conjecture is falsified it must be rejected. The rejection process can be considered as a temporal continuum with the starting point being a problem that has only recently resulted in a conjecture, and towards the other end of the continuum, a conjecture which has existed for some time having been evaluated on many occasions and not refuted. In the former case, refutation will result in the need for a new theory or conjecture to be suggested in order that the anomaly/problem first initiating the conjecture might be answered. In the latter case, the new problem that has arisen may result in an extension of the existing theory but may not necessarily result in the scrapping of all of the old theory. This latter situation may in some ways be likened to Lakatos'

positive heuristic.(73)

Thus the development of knowledge in a Popperian sense moves from theory or conjecture through to observation and experiment, via an emphasis on refutation rather than confirmation. The theorising process will not result in any statement of truth nor does numerous testing of the theory suggest proof. But merely that the theory becomes more robust with successive observation and experiment that fails to refute it, and is able to withstand tests to a greater extent. Thus truth is not attained. However one moves further away from refutation and increasingly confirms an hypothesis, as one moves through successive cycles of problem articulation, theory production to testing, and then to theory modification and further development. This view of the development of knowledge has not been widely espoused explicitly in accounting literature³¹ but fits very closely with the manner in which deductivist writers proceeded. The falsificationist' viewpoint avoids the problems of positivism, particularly those of induction since it avoids the use of induction and uses observation merely in a falsifying and confirmatory fashion and does not build theory in the first instance upon observations and induction *per se*. However, falsification does utilise observation to falsify theory. This anomaly, that observation remains an essential element of the principle of falsification yet at the same time falsificationists accept the fallibility of the observation, is less severe than the problems found in the

31. However Popper is quoted by Watts and Zimmerman (refer Watts, R.L. and Zimmerman, J.L. *Positive Accounting Theory*. Prentice Hall, Englewood Cliffs, New Jersey, 1986, p.2) who appear to advocate this approach, although as discussed later they obfuscate their position. Further explicit acceptance of this approach is seen in Walker, M. *Agency Theory: A Falsificationist Perspective*. *Accounting, Organisations and Society* v. 14(5/6), 1989, p. 433-453.

received view where the problems of observation are compounded with those of induction. Thus the falsificationists finesse the latter problem, but are left with the former at a more important level. Observation (at least individual observations) takes on a more critical importance in falsification, since a single correctly undertaken observation may falsify a theory. Contrast this position with that of the inductively derived theory whereby large numbers of observations are taken into account. All the observation based problems found under the received view are also found under falsification. Significant credit must be given to the falsification approach since it avoids the simplistic argument of logical positivism that theory derives directly from observation. When viewed from an historical viewpoint, theory does not derive from observation in the manner in which the logical positivists have argued³², and falsification avoids discussion of the nature of theory formulation and suggests that theory may be generated from any source. Thus, as long as a theory may be stated in terms that fit the requirements of falsification theory construction, then a theory is considered to be scientific and thus the work itself may be said to be scientific. Popper saw the distinction between science and pseudo-science as important, and it was the expression in falsifiable terms of a theory or proposition that was the criterion for the distinction, thus the distinction was entirely methodologically based. (74)

Popper's View of the Growth of Knowledge

The worth of a theory should be measured by comparison to those that precede it. Popper implies an historical dimension to compare the current theory with those preceding

32. Kuhn, T. *The Structure of Scientific Revolutions*. 2nd edn. University of Chicago Press, Chicago, 1970, provides a thorough analysis of the historical position.

it. Thus a legitimate theory (under Popper's model) is one which expands and extends the bounds of knowledge. This emphasis on the growth and development of knowledge is an important sociological change from that of the logical positivists, since Popper looks at the development in science, rather than the particular method or methodology that might be employed. In this regard Popper and the logical positivists differ significantly in their view of knowledge.

The logical positivists are generally interpreted as pursuing a cautious and highly experimental approach to knowledge. However, Popper argues that bold and speculative statements of relationship or theory are to be encouraged and he says⁽⁷⁵⁾,

"... falsificationists like myself much prefer an attempt to solve an interesting problem by bold conjecture, even (and especially) if it turns out to be false, to any recital of a sequence of truisms."

Thus it is only by such bold enterprise that significant gains in knowledge are made. The logical positivist approach and the Popperian approach can be contrasted as follows - the positivist progresses via incrementality and careful, methodical work in an area, whereas the Popperian advances by spectacular statements of relationships and bold views of reality and by refutation. Popper⁽⁷⁶⁾ states,

"... that in finding that our conjecture was false we have learnt much about the truth, and shall have got nearer to the truth."

It can be argued that both approaches have their place, but certainly in an emerging field of study such as theorising in accounting in the 1950's and 1960's, the Popperian approach of propounding bold new concepts and theo-

ries was how many accounting theorists presented their work, even if they did not recognise their Popperian stance and hence may not have classified their work as Popperian.

Shortcomings of the Falsificationist Approach

The fundamental problem with the falsificationist approach is the validity of using observables to refute the theory. Just as the logical positivists have been criticised for the lack of security of observational elements, so the lack of security of observational elements to falsifiability is also important and in fact more important, since a theory may be falsified by a single non-articulating falsified relationship.⁽⁷⁷⁾

Popper attempts to answer the observation issue by agreeing that while there is no secure observational element to which one can conclusively falsify a theory, there rests with the scientific community the ability to accept a single observational statement if it has been carried out using clearly acceptable techniques, both theoretic and experimental, and in line with the community's accepted criteria (similar to Kuhn's disciplinary matrix).³³ If there exists doubt over the validity of the observable, then the observation should be replicated using appropriate safeguards. Thus a theory is falsified not by resort to a single difference between an observable and the theory, but via a decision by the scientific community that the observable is legitimate and that the theory is justifiably falsified.⁽⁷⁸⁾ This is an important change in emphasis. Popper is moving the process of confirmation and falsification and thus the gathering of knowledge away

33. The disciplinary matrix is dealt with later but can be thought of as the values and rules that bind together a community that has shared interests and clear goals.

from the objectiveness of a particular method to social acceptance or rejection by the scientific community. Popper (who was concerned principally with the traditional areas of science) is maintaining that knowledge is finally adjudged not only by methodological criteria, but by the mores of social groupings. Sociologically this statement is not surprising, but it implies that so-called objective issues such as are dealt with in astronomy or physics will be adjudicated by the community and so open to prejudice and politics of the time.

The second criticism and restriction that might be placed upon the falsification methodology is knowing what has been falsified when a theory is apparently falsified. If an observable event appears to falsify a theory then presumably there exists some unreconcilable difference between the nature of the observation and the expectation of the theory. Theories will generally be based on a number of assumptions, definitions, statements of relationships etc, so that there may be any number of possible avenues by which a theory is falsified. Some of these may not be a function of the theory itself but of the assumptions and statements that underlie the theory. Thus a theory can not be categorically falsified because the observation that led to the falsification may relate to some minor (even trivial) part of the theoretical structure, or any part of the measurement or testing situation. In simple and more commonly mechanical situations involving relatively obvious examples this problem is less apparent but in complex human behaviour interactions and in experiments at the sub-atomic level, numerous assumptions and statements of the parameters of a situation are necessary, such that it becomes difficult (virtually impossible) to identify the element of the complex that is falsified. Popper counters this problem by stating that the scientist must clearly specify what part of the theory

is actually under test and then again, it will be the decision of the scientific community as to whether a particular theory has been adequately falsified or not.

This potential confusion over what has been falsified or not can be used in a permissive sense by individuals to support their favoured theory. If the observation appears to falsify a theory then there can be a resort to claiming that only certain parameters have been falsified or that the observation falls outside the range or assumptions of the theory.³⁴ While this lack of clarity can be resolved by a legitimising process within the scientific community, it leaves wide open the question of clear and resolute falsification of a conjecture or theory.

In everyday research it is common for the strength and clarity of falsification to be diminished by poorly detailed assumptions and inadequate description of the fundamental elements under test. This is manifested in accounting, where in the early 1960's numerous attempts to produce a theory of accounting and specifically, to address questions of inflation accounting were made.³⁵ Many of these theories were not stated in falsifiable terms and most writers did not adequately deal with the underlying assumptions and bases upon which the theories were founded. Chambers⁽⁷⁹⁾ noted,

"there are many categorised statements which are hypotheses only".

Thus little testing was carried out on alternative theo-

34. Similar to Lakatos' negative heuristic and the use of the positive for defensive purposes. (Lakatos, I. and Musgrave, A. (ed) *Criticism and the Growth of Knowledge*. Cambridge University Press, U.S.A., 1970.)

35. In particular, the work of Chambers which was discussed earlier.

ries and in the main theories were left to stand on issues of belief concerning objectives and the other higher order deductive elements, rather than also being subjected to scrutiny concerning the validity of internal claims.

A significant criticism of Popper's work is that his view of scientific development does not easily fit with the historical growth of knowledge and theories. Examples may be cited where a particular theory was falsified by experiment or observation, yet the researcher continued with the conjecture or theory until that view or relationship was subsequently demonstrated to be tenable, or the falsification itself was demonstrated to be invalid. Kuhn provides a detailed account of a number of cases where the development of knowledge does not fit established patterns.⁽⁸⁰⁾ This act of faith on the part of the researcher is not accommodated within Popper's methodology, where the work should have ceased when peers within the discipline considered that a legitimate falsification had taken place. Historically, progress in science has often occurred haphazardly. An observation is sometimes in conflict with a theory for a substantial period of time before the observable(s) is refined or modified in the light of more efficient techniques or changed knowledge base, and as a result the theory is no longer falsified by that particular observable. When viewed from an historical context therefore, the development of knowledge as outlined by Popper fails.

Popper Concluded

Not only does Popperian methodology fail to account for historical progress in science, it also fails to overthrow the inherent problem of reliance on observation, in common with logical positivism. The process of observation can be the constraining element in the expansion of knowledge and theory derivation, either through obsolete techniques or

restrictive knowledge of the moment.

Nevertheless the importance of the perspective of Popper is significant. His argument concerning the importance of theory over observation and the theory ladenness of observation, as well as his propounding of the notion of falsifiability, are elements significant to meta-theory and particularly significant to the work of the everyday researcher. What is also important in Popper's work is the emphasis on the puzzle-solving activity of scientists where knowledge, which Popper sees as existing beyond the realm of the individual, is sought by an individual via a series of approximations and an increasing refinement of statements. Thus concepts of truth and proof do not occur within the Popperian nomenclature and the scientist is attempting to make a better statement of some aspect of the universe rather than making the statement of reality.

Thus Popper viewed science as being beyond the individual, as a process without a subject (individual). Thus particular individuals and their beliefs were considered largely irrelevant to the process of science, since methodology and method could work to illuminate knowledge separate from the belief and mind-set of an individual. Again therefore we see an underlying conflict between the belief in the objective, and the individual.

Positivism in Accounting

Various approaches within what may broadly be termed the scientific framework for research have been discussed. In particular the call for the use of scientific enquiry in accounting was elaborated upon. The works of Chambers and others, particularly in the late 1950's and early 1960's, have been noted as advocating and prescribing a scientific methodology. However it was not until the work of Watts and Zimmerman⁽⁸¹⁾ that the scientific approach, in the

guise of positivism, gained an accepted hold within accounting theory. The 1978 work of Watts and Zimmerman might be cited as a watershed, following which there has been widespread adoption of the positivist approach (in fact some form of legitimisation seems to have occurred) and also widespread discussion concerning its applicability. The advocacy and criticism of positivism in accounting may be seen to span the gamut of the preceding section and draws together most of the various lines of argument developed to date.

The Nature of Positivism

The term positivism has been used, and misused, a great deal in the accounting literature. In fact it is difficult to find substantive debate concerning its meaning.³⁶ In

36. The reader is reminded of Keynes' definition of positivism cited earlier and also of Friedman's paper (1953) advocating a positive approach to the study of economics. (Friedman, M. *Essays in Positive Economics*. University of Chicago Press, Chicago, 1953). Sterling argues that the study of accounting practices (phenomena) in a value free fashion (avoiding prescription) is the element of positivism. (Sterling, R.R. *Positive Accounting: An Assessment*. *Abacus* v. 26(2), 1990, p. 100). Yet Kolakowski sums up the traditional view of positivism when he suggests four criteria for judging whether a work is positivist or not, "1. The Rule of Phenomenalism ... We are entitled to record only that which is actually manifested in experience." (p. 11)

"2. The Rule of Nominalism ... we may not assume that any insight formulated in general terms can have any real referents other than individual concrete objects." (p. 13)

3. There is no place for value judgments and normative statements in the universe of knowledge. (p. 16)

4. A belief in the unity of the scientific method. (p. 17).

(Kolakowski, L. *Positivist Philosophy. From Hume to the Vienna Circle*. Penguin Books, Harmondsworth, 1972).

The discussion following considers *inter alia* the modern attempts to redefine positivism.

particular, Watts and Zimmerman do not define the term³⁷ and one can only gain an indication of its meaning by implication from their writings. However, when using positivism in the economic sense, a number of analogous terms exist such as logical positivism, the received view, logical empiricism, objectivism, and neopositivist. These terms and the approaches they reflect, can all be described as positivist, although they do reflect different emphases, for example, the mathematical extension of logical positivism found in the received view.

Positivism implies that there exists an objective and independently verifiable reality separate from the individual and that this reality can be uncovered by the use of appropriate research methods.⁽⁸²⁾ Furthermore, this gradual uncovering will lead to generalised statements such as laws which ultimately describe 'reality'. The view is thus that an absolute reality exists and that the relationships between the elements thereof can be discovered. This structuralism means that by examination of particular elements, and subsequently particular changes in these elements, causal linkages can be unearthed. To the positivist, structure and causality are both fundamental elements of 'reality'. This obviously leads the positivist to the importance of scientific experiment

37. Although in their later work they attempt to distinguish it from logical positivism. However, it remains unclear as to whether they are distinguishing 'their' positivism from all the elements of logical positivism, or merely from certain aspects. To claim the former would leave Positive Accounting Theory nowhere to go besides a normative route, which they disavow. Yet to claim the latter begs the question of what elements of logical positivism are excluded and, perhaps more importantly, what are included. This is hardly acceptable as a basis for serious methodological discourse! (Refer to Watts, R.L. and Zimmerman, J.L. Positive Accounting Theory: A Ten Year Perspective. *The Accounting Review* v. 65(1), 1990, p. 131-156)

particularly laboratory experiment where a number of variables may be held constant. By controlling certain variables the outcomes can be measured, quantified and relationships uncovered.

Taking their structured view of reality further, the positivists also see human beings as examinable in the same way, an individual being no more than a stimulus-response black box.⁽⁸³⁾ Thus the individual, although complex, is subject to analysis like any other element of reality. Anderson⁽⁸⁴⁾ describes the cognitive approach in positivist research programmes and how researchers of this paradigm view individuals, stating,

"cognitive man: a rational information processor who forms beliefs, attitudes and intentions that are causally determinant of his/her [sic] behaviour."

The goal of positivism is explanation and prediction of reality and the uncovering, wherever possible, of universal laws. The researcher will undertake systematic evaluation of particular circumstances until the relationships are understood. These relationships are then codified into a general principle or law. Thus the ultimate goal for the positivist is a universal law which is generally applicable under a wide variety of circumstances both temporal and spatial. As a result of the emphasis on explanation and prediction, the causal element in the relationships is generally given high priority by the positivists, but not so by Watts and Zimmerman and several economists. For example, Friedman argued that unrealistic assumptions did not necessarily detract from the validity and use of a theory and furthermore that the realism of the assumptions could not be used as a direct test of a theory.⁽⁸⁵⁾ Friedman does hold that assumptions may be used as an indirect test⁽⁸⁶⁾ but that the primary test is the ability to predict.⁽⁸⁷⁾ This is clearly very close to the Watts and

Zimmerman⁽⁸⁸⁾ view of theory, which is to

"explain and predict accounting practice."

They then also claim that this is *"the view of theory in science"*⁽⁸⁹⁾.

Certainly the role of theory held by the logical positivists, received view proponents etc was to explain (induction) and then predict (deduction), but this is not the Popperian view where prediction and the ability to be refuted or confirmed was the key to the growth of knowledge. Thus by claiming explanation, Watts and Zimmerman are aligning themselves closely with the traditional views of science and in particular the inductive structuralist views. They would appear to be trying to claim a methodology that combines both a traditional, inductive-based view and a Popperian predictive view, at the same time! Or from a different perspective, a methodology which is product oriented (a scientific approach characterised by the inductive [positive] approach) as against one which is process oriented (falsification and hence deductive).

The positivist approach suffers many of the shortcomings of the scientific approach discussed earlier in this chapter. For example, positivists believe that the researcher is able to remain separate from (and objective to) the subject under analysis - that the researcher can take an independent and non-interfering position with respect to the subject, that is, the separation of the observation and theory planes. The positivist also believes that it is appropriate to use proxies to measure sociological and hence human attributes.

Logical positivism can be differentiated from other positivist approaches due to its extreme position concerning the worth of the scientific approach and the uncovering of

reality. Although Watts and Zimmerman distinguish their approach from that of logical positivism⁽⁹⁰⁾, I question whether their distinction is based on anything more than a defence against the obvious criticism that may be laid against logical positivism and the general positivist approach. Watts and Zimmerman's differentiation between positivism forms is possibly a none-too-subtle attempt to sidestep the raft of criticisms that would fall upon them without divorcing their approach from logical positivism. However, they can not claim positivism and at the same time, exclude it; although they may exclude certain elements of the general positive approach, namely the excesses of logical positivism. Nevertheless Watts and Zimmerman claim fundamentally that their approach is positivist. They can not have it both ways! Yet these shortcomings are virtually ignored by Watts and Zimmerman to the extent that Feyerabend's comment on the treatment (or lack of) by scientists of problems of scientific inquiry is appropriate - he says⁽⁹¹⁾,

".. the existing troubles had to be pushed into the relation between theory and fact, and had to be concealed, by ad hoc approximations and other procedures."

Value of Theory

Watts and Zimmerman also claim that theories may have errors and that attempting to capture the total reality of a particular area of study is extremely difficult if not impossible. These errors should not lead to the discarding of the theory. Thus a theory or explanation can exist that does not cover every possible observation. However, in a scientific approach, theory should only hold if it is a better predictor than any other existing theory. Yet Watts and Zimmerman continue by saying that the value of theory lies in the value of the theory to the prospective users, rather than in its explanation of the universe. Therefore theories under a Watts and Zimmerman protocol will be

judged according to their usefulness in a political/economic environment.³⁸ They state⁽⁹²⁾,

"... theorists will be influenced by the intuitive appeal of the theory's explanation for phenomena and by the range of phenomena it can explain and predict as well as by the usefulness of its predictions to users."

Thus the adjudged worth of a theory may not be its generalised appeal re: explanation, but its acceptance by users, based on usefulness. This hints at an important conflict between the worth of a theory in the uncovering of universal explanations (knowledge *per se*) versus its economic worth. The two are likely to be substantively different. Thus the judging of a theory and the criteria used to do so, are left loosely specified by Watts and Zimmerman. For example, at what stage does the derivation of knowledge *per se* run counter to the interests of an individual whose own betterment may well lie in the preservation of their position via a situation of partial ignorance? It would be heroic indeed to claim that an individual's self interest was such that knowledge and wisdom would automatically accord with their own interest and the interests of others. At one extreme, one might describe their approach as postmodern³⁹ and moving more towards a *laissez-faire* model of discovery, in other words discovery and knowledge driven by economic reward.⁽⁹³⁾ Or, perhaps they adhere to the view reflected by Lyotard⁽⁹⁴⁾ in commenting on the

38. This led to Watts and Zimmerman's second article, The Demand for and Supply of Accounting Theories: The Market for Excuses. *The Accounting Review* v. 54(2), 1979, p. 273-305.

39. The term postmodern, and its implications for inquiry, will be discussed in detail in Chapter Eight. For the moment it can be summarised as a form of enquiry based on two precepts: firstly (and initially) it is a criticism of the modern, and secondly (as the postmodern matured) as providing alternatives to the modern.

postmodern condition, when he says

".. it remains possible and useful to assess the value of works of art [read theory] according to the profits they yield. Such realism accommodates all tendencies, just as capital accommodates all 'needs', providing that the tendencies and needs have purchasing power."

This view of the mercantilisation of knowledge is a significant element of the postmodern position⁴⁰, but odious to the positivist working in his/her structural fashion such that it is inconceivable that Watts and Zimmerman could intend that this interpretation be placed upon their work. Thus Watts and Zimmerman seem again to be placing their bets both ways.

Finally, it should be noted that Watts and Zimmerman do allow for competing theories and alternative approaches and explanations other than that of positivism. But in summary, it must be said that Watts and Zimmerman seem to draw a number of arguments in favour of positivism (their version not clearly enunciated) but these do not sit coherently with each other nor do they form a codified structure relating one part to the next with ease. Thus Watts and Zimmerman are mixing and matching to suit, rather than deriving arguments from the underlying methodology.

It is interesting that while Watts and Zimmerman advocate a positivist approach, they claim at the same time that

40. This is a particular theme through much of the work of Lyotard. The mercantilisation may be seen as power supporting which in turn supports the technology/scientific position; thus the self legitimising circle is closed. (Refer to Lyotard, J.F. *The Post Modern Condition: A Report on Knowledge*. Translation from the French by G. Bennington and B. Massumi. University of Minnesota Press, Minneapolis, 1984, p. 45-47.)

the positivist upswing in the marketplace is due to the more cost-effective nature of positivist research as compared with normative research. It is the marketplace which is demanding positive accounting research and not the theorists who are providing knowledge *per se*.⁴¹

The positivists face the general problems of induction and observation and in particular the subjectivity and theory-ladenness of observation and the lack of separation between the observable and theory.⁽⁹⁵⁾ For example, to describe the acceleration of an object being dropped from a certain leaning tower needs a certain knowledge of gravity, mass, weight, time, etc. Hence the object falling from the said tower can not be described separate from, or independently of, theory. May and Sellers⁽⁹⁶⁾ state,

"what is construed as fact depends upon one's theoretical framework ... Thus the 'subjective' perspective of the scientist influences the 'objective' data."

For example, Kuhn⁽⁹⁷⁾ argues that the subjective element is particularly dominant when interpretation and explanation is demanded and that,

"... interpretation begins where perception ends. what perception leaves for interpretation to complete depends drastically on the nature and amount of prior experience and training."

Although others (for example, May and Sellers) hold that the separation of fact from value judgement adhered to by positivism is in fact an anomaly. May and Sellers⁽⁹⁸⁾ sum up the positivist tradition when they say,

"One cannot help but question why neo-classical economics continues to invoke positivism as the only acceptable meth-

41. Refer to the earlier discussion on the mercantilisation of knowledge.

odology when positivism has been in decline for more than twenty years in the philosophy of science."

Shortcomings of Positivism

Lowe, Puxty and Laughlin⁽⁹⁹⁾ have been highly critical of the Watts and Zimmerman approach. They particularly criticised the use of an economic framework of analysis when applied to a political process maintaining that the use of a tool from another area must be justified when it is transposed. They also point out that the general approach to theory advocated by Watts and Zimmerman, and held within the natural sciences, is in conflict with what Watts and Zimmerman themselves say. A single exception to a theory invalidates that theory within the positivist school, yet Watts and Zimmerman allow theories with anomalies to continue.⁴² Furthermore, in their 1978 article they propose a positive theory of accounting that is not substantiated by research. Watts and Zimmerman are thus becoming virtually normative in their approach by advocating a view of the world (a hypothesis) that is not justified via their own research requiring an act of faith on their part; in other words, a recourse beyond the methodology to persuasion.

Lowe et al also argue that Watts and Zimmerman miss one of the fundamental tenets of scientific research, that is the replicatibility and refutability of theory. They maintain that there is inadequate evidence provided by Watts and Zimmerman to allow replication and testing of their theory. Furthermore, that to ascribe self interest as the motivating force behind hypothesis and theory is to under-rate individuals and to poorly reflect the broader and competing issues and interests of individuals. Finally,

42. Sterling also refers to this problem. (Sterling, R.R. Positive Accounting: An Assessment. *Abacus* v. 26(2), 1990, p. 104-105).

Lowe et al point out that the inflation accounting research debate began long before the legislation gave the topic a high profile politically and academically. Yet the Watts and Zimmerman proposition is that it was the legislation that resulted in the political activity and consequently stimulated the demand for accounting research and theories on the topic. These are all valid arguments not refuted by Watts and Zimmerman.

Others, including Ball and Foster⁽¹⁰⁰⁾, have criticised Watts and Zimmerman on the grounds of method, sample size and have suggested that size of firm is not an adequate proxy for political costs. Although size has been used by other researchers as a proxy for competitive advantage, Watts and Zimmerman do not adequately (virtually not at all) justify their use of size as a political proxy. As Ball and Foster⁽¹⁰¹⁾ state,

"Watts and Zimmerman [sic] .. face a responsibility under their theory to convince the reader that size is a valid proxy for political costs."

McKee et al⁽¹⁰²⁾ replicated as far as possible the tests of Watts and Zimmerman as found in their 1978 article and their criticism focussed on the method used, in particular because Watts and Zimmerman did not use a holdout (control) sample. Furthermore, when McKee et al used the new sample to test the hypothesis they found the results did not hold. They thus raise substantive queries concerning the validity of the theory. These are criticisms that run against the core of a theory, that is the ability to be replicated. Yet this falsification (bearing in mind Watts and Zimmerman's use of the Popperian model to substantiate their positivist position) was largely ignored when one would expect it to be directly addressed. Hence it appears that Watts and Zimmerman, while advocating the positivist approach, do not wish to be bound by the rules!

The most substantive criticism of Watts and Zimmerman has been made by Christenson who addressed significant methodological shortcomings.⁴³ Rather than using the general form where a theory would hold in every case and for every member of a particular class of events, Watts and Zimmerman have used a weak form in that a theory is true and applicable in most or many instances, but not all. Yet positivism *per se* is concerned with the strong form of theory. Christenson⁽¹⁰³⁾ quotes Pareto,

"A law (that admits exceptions) has no significance, and knowledge of it is not the slightest bit of use."

Christenson⁽¹⁰⁴⁾ goes on to say,

"By arguing that their theories admit exceptions, Watts and Zimmerman condemn their theory as insignificant and useless."

On a more methodological level, Jensen⁽¹⁰⁵⁾, and later Watts and Zimmerman advocate a positivist over a normative approach. However the statement of a preferred methodology in itself undermines their position. The choice between the two was presumably based on personal experience or faith. The personal experience argument runs something like "positivism has worked well in the past therefore it is the preferred methodology", but how was their construct arrived at? The answer (presumably), by observation, which is itself positivist and circular as are the problems in justifying induction. The other proposition is one of a

43. See also the work by Tinker, A.M., Merino, B.D. and Neimark, M.D. The Normative Origins of Positive Theories: Ideology and Accounting Thought. *Accounting, Organisations and Society* v. 7(2), 1982, p. 167-200 and Sterling, R.R. Positive Accounting: An Assessment. *Abacus* v. 26(2), 1990, p. 97-135. Both these articles deal with similar points to Christenson, but from different perspectives. Tinker et al take a more radical and quasi-Marxist perspective while Sterling takes a more academic and objective perspective.

priori or, in this case, faith, which hardly seems a basis for the foundation of a positivist justification! Hence we see an advocacy of positivism based upon the premise of a normative choice. Arrington and Francis⁽¹⁰⁶⁾ provide a particularly effective deconstruction of Jensen's arguments concerning positivism, agency theory and contracts which are presumed to exist.⁴⁴ It is interesting to note that Jensen's agency work is grounded in the normative propositions of the 'survival of the fittest' and minimisation of agency costs.⁴⁵ This implies that his so-called positive theory is by internal argument adjudged as normative, with an empirical tail! A similar criticism can be made of the position held by Watts and Zimmerman.

In summary then the work of Watts and Zimmerman and their advocacy for a positivist approach has received widespread discussion and appears to have fostered a wide following. It also seems to have spurred the use of positivist research, effectively the use of the scientific method, albeit under a different guise. Yet again the use of a method has been adopted with little consideration of methodology, epistemology, or even appropriateness. The positive approach may be a legitimate approach for considering large sets of data and the handling thereof. However the positive approach is still open to all the problems that are found under the traditional scientific approach, that of induction and deduction, and would be better if it were allied more closely to the Popperian falsification arguments and tenets, particularly the strong requirement for refutability and replicability.

44. The critical analysis of the principles of agency theory and positivism are considered in more detail in Chapter Seven.

45. Also refer to Sterling R.R. Positive Accounting: An Assessment. *Abacus* v. 26(2), 1990, p. 106.

Conclusion

Thus Watts and Zimmerman have effectively done no more than take the traditional scientific approach, repackage it with changed nomenclature and add a number of generalist statements about the worth and importance of it. They fail however to address the methodology under question, yet have still managed to achieve widespread consideration and support for their views.

So yet again we see method holding out over methodology, with inadequate consideration of methodology, epistemology, or ontology and scant justification for the particular approach. These criticisms can be made over much of the applied accounting theories, where accountants have sought to move quickly to the practical, the testing and the method levels, without due consideration of the methodology, where they have come from and perhaps where they are going. The period from the mid 1950's to the present is replete with calls for theory and methodological consideration, yet in the 1980's an approach that carries forward the essential failings of the scientific approach, and even worse does so with the pretense of providing some methodology, has had a major impact on accounting literature and research.

Perhaps what is needed is a wider methodology of the development of knowledge that goes beyond the limitations of the scientific approach but which at the same time is able to accommodate the use of that approach - by recognising the limitations and what the strengths of logic, empiricism and rigour (the latter particularly found within the Popperian model) have to offer. In particular, a wider methodology would see the development of knowledge within a social context and not as a 'concrete' reality. Kuhn provided such a view - a world view - and an historical perspective that broadened the structuralist perspec-

tive. He placed the development of knowledge in its temporal context and his views have attracted much discussion in accounting literature. To these ideas we will now turn.

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CHAPTER FIVE

DISCIPLINARY MATRICES, REVOLUTIONARY CHANGE AND WELTANSCHAUUNG

Introduction

The writings of Kuhn¹ have been widely discussed within the accounting literature.² Considering the nature of the process that he proposes as well as the social dimensions of his work the extent of Kuhn's influence may at first appear somewhat surprising. Kuhn was the first weltanschauung³ writer to have substantial impact on accounting (theory). This was not only a sign of the broadening perspective within accounting but also of the growing dissatisfaction with the then current methodologies employed in the pursuit of the growth of knowledge.

1. The principal work being Thomas Kuhn's *The Structure of Scientific Revolutions*, 2nd edn. University of Chicago Press, Chicago, 1970. This is used throughout this chapter as the standard reference.

2. Chambers was one of the first accountants to note Kuhn's ideas and their possible application to accounting (see Chambers, R.J. *Accounting, Evaluation and Economic Behavior*. Prentice-Hall, Englewood Cliffs, New Jersey, 1966, p 374). Another early reference was by Sterling (see Sterling, R.R. A Statement of Basic Accounting Theory: A Review Article. *Journal of Accounting Research* v. 5, Spring 1967, p. 100). The most important contribution to the discussion was made by Wells in 1976 (see Wells, M.C. A Revolution in Accounting Thought? *The Accounting Review* v. 51(3), 1976, p. 471-482).

3. Weltanschauung is a German concept to do with a world, or holistic, view particularly referring to the interaction of thought, society, and history. It is a view in opposition to the structuralist view, particularly of science, which is abstracted from the everyday activities of humankind. Suppe defines weltanschauung as a "conceptual perspective upon which the meanings of terms are dependent." (Suppe, F. (ed) *The Structure of Scientific Theories*. 2nd edn. University of Illinois Press, U.S.A., 1979, p. 120).

This chapter initially backgrounds the work of Kuhn and then discusses his model of revolutionary change. This is followed by a discussion of how the Kuhnian model fits accounting and the application of Kuhn's work in the Statement on Accounting Theory and Theory Acceptance (SATTA) and the views of critics (of both Kuhn and of the work of SATTA). The chapter concludes with the most significant implication of Kuhn's work, namely the weltanschauung and the disciplinary matrix.

Background

Kuhn's view of the way in which science progresses was radical in that the progression was viewed as a series of tradition-overturning revolutions rather than a gradual evolutionary change. The tradition shattering revolution resulted in a new disciplinary matrix⁴ gaining dominance and overthrowing the previously held view. Kuhn's view is that each new disciplinary matrix should better fit the world than the disciplinary matrix it has overthrown. The process of change in Kuhn's model was summarised by Wells⁽¹⁾ as:

- pre-science
- normal science
- crisis
- revolution
- new normal science

The pre-science stage is characterised by a number of alternative views about the nature of the area of concern and although there will tend to be shared views amongst researchers, no clear vision or theory will yet have

4. The term disciplinary matrix is used throughout this chapter, rather than Kuhn's earlier term paradigm. The meaning of both terms will be discussed later in the chapter. This usage is justified in Kuhn's postscript to the 2nd edition, op. cit. p. 181-187.

resulted. Kuhn⁽²⁾ says that:

"The pre paradigm period in particular, is regularly marked by frequent and deep debates over legitimate methods, problems, and standards of solution"

During this period alternative theories or constructs will gradually be developed and advocated by persons working in the group and gradually the phenomena described will be pieced together and interpreted. Kuhn⁽³⁾ states,

"Only as experiment and tentative theory are together articulated to a match does the discovery emerge and the theory become a paradigm."

At this stage, normal science will emerge. There are two important implications. Firstly, that the process beyond normal science can only take place in communities that have attained a scientific status (largely undefined by Kuhn)⁵ and secondly, that the scientific community now enters a disciplinary matrix.

The disciplinary matrix will attract followers of previous disciplinary matrices from the competing fields of activity. There will be a number of problems still to be solved concerning the new theories and scientists within the new normal science will gradually work away on an incremental basis within this new scientific matrix. It may be noted that⁽⁴⁾,

"Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come

5. Nevertheless Kuhn does specifically refer to "confirmation or falsification" (p. 80) and hence one might presume a Popperian view of science. This revolutionary conventionalist view of science is alluded to in other places also, for example, he notes limitations of Popper's views (p. 146).

to recognise as acute. To be more successful is not, however, to be completely successful with a single problem or notably successful with any large number. The success of a paradigm ... is at the start largely a promise of success discoverable in selected still incomplete examples. Normal science consists of the actualisation of that promise, ..."

Thus the move from one disciplinary matrix to a new one takes place when there emerge severe shortcomings and unanswered or unexplained anomalies within an existing disciplinary matrix. These anomalies must be so acute as to shake the foundations upon which researchers and workers within a disciplinary matrix are operating. Once a new disciplinary matrix becomes established this is viewed as a period of normal science embodying relative stability and work on detail areas. Kuhn⁽⁵⁾ describes this as,

"... 'normal science' means research firmly based upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice. to define the legitimate problems and methods of a research field for succeeding generations of practitioners."

Thus the disciplinary matrix may be seen not just as a sharing of a scientific view, but a sharing of a cultural setting and a sharing of the way in which things are done. This is emphasised by Kuhn⁽⁶⁾ when he says, discussing the role of the scientist,

"Without commitment to a paradigm, there can be no normal science."

Normal science becomes a period of puzzle solving and the gradual broadening of the body of knowledge and explanation, the gradual elimination of areas of poor definition from the initial explanation, and potentially a gradual

perception of wider problems which might at some future time lead to a fundamental crisis for the disciplinary matrix.⁽⁷⁾ Thus the normal science will gradually develop and clarify its science, bringing about a closer articulation of theory with fact.⁽⁸⁾ As problems develop for which no clear solution is in evidence, the response from the community will depend on the nature of the problems - they may be put to one side or, if they are fundamental, they may result in substantial work by the community. If, in spite of substantial work by the community, these problems become more critical and increasingly unsettle the community, then gradually a period of crisis may be reached whereby radical alternate theories are presented.⁽⁹⁾

This period of crisis is characterised by a breaking down of the existing structures and rules governing the methodology of the culture. During this stage Kuhn⁽¹⁰⁾ sees the pluralistic development and counterinduction within the discipline taking place.⁶ It is only in the period of crisis (leading perhaps to revolution) that Kuhn sees alternative theories being seriously considered. Throughout the foregoing period of normal science there is no room for counterinduction or plurality of theory in the Kuhnian model.

The crisis stage may lead to one of three outcomes. The anomaly may be solved via the existing normal science which would lead to a re-establishment of the existing disciplinary matrix, perhaps with extended or differing epistemology, methods and boundaries. Secondly, the existing disciplinary matrix may be overthrown by a new disciplinary matrix (and a new normal science), which is clear-

6. At this point, there is substantial similarity between the work of Kuhn and the work of Feyerabend (refer to Chapter Eight).

ly at odds with the existing normal science. Or thirdly, there may be a continuing period of irresolution whereby numerous theories will be supported by differing groups, none of which will have widespread acceptance. It is in the second option where the crisis is ended by a move to a new normal science via a gestalt switch.⁷

Kuhn's Process of Change

More detailed comment on the nature of this progression follows.

Prescience

The term prescience covers the period that exists within a field of study before the existence or acceptance of a disciplinary matrix. It is described by Kuhn⁽¹¹⁾ as a fact-finding period, a random and relatively unstructured period, when

"... all of the facts that could possibly pertain to the development of a given science are likely to seem equally relevant. As a result, early fact-gathering is a far more nearly random activity than the one that subsequent scientific development makes familiar."

At this stage, because the facts are perceived in a relatively haphazard fashion, and because they are not gathered in a structured way that follows any particular theory, they may often seem to be contradictory,⁽¹²⁾

"... in the early stages of the development of any science different men confronting the same range of phenomena, but not usually all the same particular phenomena, describe and interpret them

7. The gestalt switch may be likened to a religious conversion where a completely new view of the world supplements the old in a short period of time, such that the old and new views are so at odds that they cannot be entertained concurrently. Kuhn used the phrase, "picking up the other end of the stick" (see Kuhn, T. op. cit. 1970, p. 85).

in different ways."

During prescience a number of alternative theories will be in evidence and the period is frequently marked by high levels of discussion, much experimentation, inductive as well as deductive theory building. Accepted methodologies and methods for carrying out research will not even exist since the nature and substance of the area itself, both materially and intellectually, will have not yet been well described. Thus a number of factors will be unanchored such as boundaries, methodologies, procedures, rules, and conventions. Gradually as research continues and a better understanding occurs, the period of normal science will begin to emerge and with it, the emergence of a particular disciplinary matrix. The effect on practitioners within a field will be such that a particular view gains gradual ascendancy and alternate views gradually disappear. Most practitioners adhering to other views will switch allegiances to the developing disciplinary matrix (although some will probably continue as 'rogues' following their own views). Those who do not join the new disciplinary matrix will be ignored and typically ostracised from the new community.⁸

This new definition and more rigid outline implies an act of membership and acceptance by members to the discipline in a manner akin to an acceptance of faith. Kuhn⁽¹³⁾ says,

"The new paradigm implies a new and more rigid definition of the field."

Normal Science

Once the normal science is established then work becomes essentially a puzzle solving activity within the framework

8. Kuhn suggests two (although there may be many) alternatives for the non converts, that they end up being non scientists (p. 159) and ignored (p. 19), and that they finally die of old age (p. 151).

of the disciplinary matrix. The assumption is that a puzzle is solvable and therefore no essential dissonance should exist within the scientist, since the scientist knows that by continuing to work, there should be an answer to the question. If the puzzle solving activity had a solution which lay outside the discipline then this would not fit with the belief system that is carried within a normal science period. Chalmers⁽¹⁴⁾ describes the disciplinary matrix (paradigm) as being,

"... made up of the general theoretical assumptions and laws and techniques for their application that the members of a particular scientific community adopt."

There exist within the disciplinary matrix rules which limit the nature of acceptable solutions, as well as acceptable methods and methodologies by which solutions may be obtained.

Thus the process of normal science is a progression through the discovery of anomalies and their gradual explanation from within the disciplinary matrix. As the anomalies are explored, adjustments to the disciplinary matrix will result and are to be expected. When new phenomena are discovered within the disciplinary matrix they are seen by Kuhn as having three characteristics:⁽¹⁵⁾

- there must have been a previous awareness of the anomaly;
- there will be a gradual emergence of both observational and conceptual recognition; and
- there will be a resultant change of nomenclature and procedures within the disciplinary matrix, frequently accompanied by some degree of resentment and resistance by members of the scientific community.

The process of the emergence and understanding of anomalies is important for the disciplinary matrix. In particu-

lar, Kuhn sees the resistance offered by members of the disciplinary matrix or scientific community as an essential part of the dialectics concerning the acceptance of the new views and importantly, the existing disciplinary matrix is only modified after due discussion and care,⁽¹⁶⁾

"By ensuring that the paradigm will not be too easily surrendered, resistance guarantees that scientists will not be lightly distracted and that the anomalies that lead to paradigm change will penetrate existing knowledge to the core."

Thus any such changes must be fully and carefully discussed and disseminated before they are accepted by the community.⁹

Within a normal science period the development that takes place also results in the gradual evolution of a new nomenclature and the refinement and development of:

- concepts and testing techniques; and
- new methods and methodologies for research, education and practice.

Unfortunately, anomalies are only discovered against a framework which is provided by the disciplinary matrix itself, thus anomalies which lie outside the ambit of the disciplinary matrix will not be discovered. Kuhn⁽¹⁷⁾ states,

".. novelty ordinarily emerges only for the man who, knowing with precision what he should expect, is able to recognise that something has gone wrong."

Thus anomalies will be seen to be within the expected and normal field of research undertaken by a member of the disciplinary matrix otherwise they will be ignored (or not

9. Refer to Kuhn, T. op. cit. p. 181-191 for details.

even recognised for what they are). There will exist a band of anomalies beyond this which will not concern members working in the disciplinary matrix because they will have been defined as being of no importance. This point is illustrated by the situation in financial accounting in the last thirty years where the nature of financial arrangements and organisational determinants have changed radically. Yet financial accountants (in particular) have been struggling to adapt to changes that had effect one or two decades earlier (for example, executory contracts). Consequently, many financial accountants view the more recent political and economic developments as outside the accountant's domain and hence outside their area of concern. One might cite the case for corporate social responsibility accounting as a reporting tension or novelty outside of the profession, barely recognised by members within the profession.

Some anomalies will go to the very heart of the disciplinary matrix and their resolution will involve considerable controversy since the nature of the disciplinary matrix will be fundamentally and irrevocably changed such that it will no longer be recognisable. These anomalies, if they are not solved by exclusion from the discipline, will result in what Kuhn⁽¹⁸⁾ calls,

".. a period of pronounced professional insecurity."

Once this cusp is reached then the disciplinary matrix is said to be in crisis state. Thus a crisis state exists when the puzzles of the normal science period regularly fail to be explained within the normal science and where participants recognise that the procedures and rules of the normal science have failed. Hence Kuhn⁽¹⁹⁾ says,

"Failure of existing rules is the prelude to a search for new ones."

Crisis

Although the failure of existing rules leads to a break up of the established order, it must be realised that the emergence of a crisis state does not lead one-to-one to the rejection of the existing disciplinary matrix. The earlier disciplinary matrix will only be rejected when an alternative is adequately articulated and is available to replace it. Furthermore, rejection of the earlier disciplinary matrix follows a period of conjoint existence and a period of comparison and debate across the competing schools of thought. As Kuhn⁽²⁰⁾ states,

"... and the judgement leading to that decision involves the comparison of both paradigms with nature and with each other."

There may be, in a crisis stage, a number of competing and well articulated disciplinary matrices, the supporters of which follow with something akin to religious zeal.

The crisis may be seen to have taken hold when there is a blurring of the old normal science and the old disciplinary matrix and a gradual breaking down of the rules under which normal research is conducted. When a new disciplinary matrix emerges, so does a new normal science. The new normal science is more than a refinement or redefinition of the old, in that it involves a fundamental rebuilding of the field of study including its elementary theoretic generalisations, its methodologies, method, applications, and culture. In fact⁽²¹⁾,

"When the transition is complete, the profession will have changed its view of the field, its methods and its goals."

Kuhn does not describe in detail the process by which the transition from one disciplinary matrix to the new takes place and is unable to say what key elements or criteria lead to the transition or the overthrow from one to another.

er. Multi-dimensional works including catastrophe theory⁽²²⁾ may provide clues on how the cusp may develop and the apparent switching of views. However, Kuhn clearly sees social and cultural factors as being important.

Within the period of competition between disciplinary matrices one can note that the proponents of the various disciplinary matrices apparently talk past one another, in other words, they can not even perceive the others' position(s). Kuhn suggests three reasons for this:

Firstly, the advocates of the alternative disciplinary matrices will typically not agree about the problems that are critical. Nor will they agree about the key problems that any new disciplinary matrix must solve. For example, within accounting some have considered the effects of inflation and revaluation as critical in the financial accounting field; others have considered that objectives are more important; yet others believe that definition of user groups is of paramount importance; others believe the nature of the decision making is critical; still others see the legal and structural framework as being critical. Advocates of each of these different positions may attach varying levels of importance to some or all of the other views, but will not agree with the overall position taken by opposing advocates. Thus even in a matter such as the issuing of financial reports, there are widely differing views amongst practitioners and academics. If then there is lack of unanimity over the basic undertaking of financial reporting, how can any unanimity be reached on the best method for a particular practice? Consequently, professional bodies have regulated by decree, as a practical means of coping with the various alternatives and plethora of

systems and choices available. (The influence of these statements by professional bodies is discussed earlier in Chapter Three, Theory by Fiat).

The second area of misunderstanding across disciplinary matrices is one of nomenclature. The new disciplinary matrix will often use much of the same nomenclature, conceptual and methodological processes of the previous disciplinary matrix, but in a different fashion. Thus substantial misunderstanding between proponents of the alternative schools results due to a shared language but different meaning.¹⁰ These misunderstandings and ambiguities are difficult enough to cope with when dealing with practical issues, but when considering conceptual and methodological questions language ambiguities can become insurmountable.

The third problem area is perceptual, concerning the nature of understanding and reality. The proponents of different disciplinary matrices will perceive their world in different ways and the groups of scientists will perceive the same item quite differently.

The consequence of these three fundamental differences is that when a switch occurs between an old disciplinary matrix and a new, it occurs very quickly and can be likened to a religious conversion. Kuhn⁽²³⁾ compares the transition to a gestalt switch,

"... it must occur all at once (though not necessarily in an instant) or not at

10. This is perhaps analogous to the often quoted English language problem between the United States and the United Kingdom where perhaps the biggest communication problem is the common language.

all."

Thus the switch occurs quickly and totally, moving a person from one mind-set to another such that the person has problems perceiving the other position both before and after the switch, when looking firstly from view A to view B and then after the switch, from view B to view A. On the nature of the switch, Kuhn⁽²⁴⁾ compares it to a matter of faith when he says,

".... crisis alone is not enough. There must also be a basis, though it need be neither rational nor ultimately correct, for faith in the particular candidate chosen. ... sometimes it is only personal and inarticulate aesthetic considerations .. have been converted by them at times when most of the articulable technical arguments pointed the other way."

The New Normal Science

The revolution that takes place when an old disciplinary matrix is replaced by a new one is referred to by Kuhn as a scientific revolution. This shakes the core of the scientific community and results in a switch from the old to the new. Chalmers⁽²⁵⁾ states,

"A scientific revolution corresponds to the abandonment of one paradigm and the adoption of a new one, not by an individual scientist only but by the relevant scientific community as a whole."

The establishment of a new disciplinary matrix can be viewed across four principal areas. The features as discussed by Kuhn are:

1. **symbolic generalisations** - expressions and nomenclature which can be readily expressed in logical argument and which are employed commonly and without ambiguity by members of the community;
2. **shared commitments** held by the community to beliefs which help to determine what may be accepted as an

explanation and what may be accepted as a puzzle solution;

3. **values** which are shared by the group and which are an important guide to group behaviour; and
4. **exemplars** which are problem-solutions that are taught to students within the discipline and which establish set procedures and precedents by which members of that community undertake their work.

It can be seen from these that the disciplinary matrix impinges on the entire group of persons pursuing similar ends and in particular, as Kuhn discussed, scientific ends. Items such as the shared commitments and values mean that the group is much more than just a technically similar organisation, but is one that pursues and follows similar social conventions. The role of the exemplars acts to further codify and define accepted practice within a community and to effectively regulate the entrance or admissions to that community.¹¹

Thus Kuhn's historically based model of the development of knowledge provides a comprehensive explanation based on detailed and careful consideration of actual scientific advances and by commentators beyond the normal philosophy of science circle. The key question of this weltanschauung approach is its applicability to accounting.

11. Certainly not all writers shared Kuhn's clear view of the disciplinary matrix. Shapere considered the difficulty of recognising the paradigm stating, "still greater perplexities are generated by Kuhn's view that paradigms in general can not be formulated adequately" and later, "the distinctions between paradigms and the different articulations of a paradigm, and between scientific revolutions and normal science, are at best a matter of degree." (Shapere, D. *The Structure of Scientific Revolutions*. *The Philosophical Review* v. 73, 1964, p. 386 and p. 388.)

To What Extent does the Kuhnian Model fit Accounting?

Of all the more recent writers in the area of the philosophy of science the work of Kuhn, and particularly his view of scientific development and discovery, has been applied to accounting perhaps more than any other. On this Mumford⁽²⁶⁾ says,

"accounting academics seem to have become remarkably susceptible to the ideas of Thomas Kuhn, whose theory of 'scientific revolutions' has been evoked far and wide in an attempt to understand how accounting ideas develop."

Wells has drawn detailed parallels between the progression of accounting thought and the progress of science as put forward by Kuhn. Wells⁽²⁷⁾ argues that the period up until the late 1930's has substantial similarity to the pre-science period,

"... during the late 1930's and 1940's attempts were made to formalise the framework underlying the rule for recording and reporting financial matters. The works of Gilman (1939), Sanders, Hatfield and Moore (1938), Paton and Littleton (1940), and others attempted to rationalise existing practices and to set the framework within which alternative ideas and procedures might be evaluated."

The framework of ideas which emerged during this period has characteristics of a paradigm."

Wells sees the development of the disciplinary matrix of accountants emerging during the 1940's and meeting the four features of a disciplinary matrix as follows:

1. the symbolic generalisations and accepted nomenclature are evidenced by such notions as the double entry equation, the nature of income, liabilities, assets (both fixed and current) and various other classifications such as the calculation of working capital and certain ratios. Wells saw these as being

widely shared amongst the accounting community and being held in high regard with little debate over their fundamental nature.

2. **Shared commitments**, Wells argued, include the realisation and matching principles as well as going concern and the cost basis of asset valuation.
3. The **values** shared by the group include the basic accounting conventions such as conservatism, consistency and materiality.
4. The **exemplars** are seen in a wide range of textbooks and continuing professional development programmes which have common attributes across countries and languages.

In examining the dominance of the historic cost model of accounting, Wells argues that the period of the late 1940's through to the early 1960's corresponds to that of normal science. However the historic cost model contained a number of anomalies. These anomalies applied to both external reporting as well as to internal reporting and management accounting. During the 1960's there was substantial literature concerning these anomalies, particularly the problem of price-level changes, and it is this period that Wells considers to be the period of professional insecurity when the crisis stage begins. The problems facing the profession resulted in new professional bodies being formed, for example, the Accounting Principles Board was replaced by the Financial Accounting Standards Board, and many research and disclosure papers were produced concerning the anomalies.¹²

12. Both Sterling and Flamholtz supported the Kuhnian idea of the revolutionary nature of change (refer Flamholtz, D. The Structure of Scientific Revolutions and its Implications for the Development of Accounting Policy. In Coffman, E.N. (ed) *The Academy of Accounting Historians Working Paper Series v. 2*, Virginia Commonwealth University, 1979, p. 124-141). Laughlin took a counter view strongly

However, many writers consider that the resultant work was largely of an *ad hoc* nature dealing with particular problems and lacking an overall goal or framework to guide, and provide articulation across, the various research activities. This is not surprising considering the absence of any generally accepted theory of accounting and even any generally accepted objectives of accounting. Thus the only way that conformity was established was by the imposition of standards and principles by the various professional bodies. Wells believed that many of these dicta, rather than providing conformity and strength for the profession, led to increasing disenchantment and a wide variety of frequently non-articulating methods. The result was a hastening toward⁽²⁸⁾,

"the ultimate acceptance of an alternative disciplinary matrix"

The principal failure of the historic cost model was its inability to account for the effects of inflation particularly in asset pricing (non-monetary assets) and income determination. According to Wells this problem went to the heart of the historic cost model and is an anomaly that has defied solution leading to a Kuhnian period of crisis. This crisis stage of the accounting disciplinary matrix has also been characterised by workers seeking a firmer philosophical basis or theoretic underpinning for the discipline. This is analogous to Kuhn's⁽²⁹⁾ description of the crisis process,

...Continued...

rejecting Kuhnian application and putting forward a differing interpretation of a paradigm and normal science. He argues that Kuhn's revolutionary process does not adequately reflect the manner in which accounting has progressed and he feels that the paradigm model is inappropriate (refer Laughlin, R.C. On the Nature of Accounting Methodology. *Journal of Business Finance and Accounting* v. 8(3), 1981, p 344, 346).

"... in periods of acknowledged crisis, scientists have turned to philosophical analysis as a device for unlocking the riddles of their field."

Wells specifically cites the establishment of the Trueblood Committee as evidence of this pursuit and the work of the Corporate Report and the Financial Accounting Standards Board 'Statements on Financial Accounting Concepts' can also be cited.

During the period of the 1970's a number of price-level alternatives emerged. This can be seen as a logical development within the crisis period since the problems facing the normal science worsen and there are far-reaching divisions within the normal science. The identification of alternative schools of thought is seen as a key development within the Kuhnian process. Further, Wells argued that accounting was undergoing a revolution and the various price-level models were the alternative new disciplinary matrices.¹³

The process of accounting development as argued by Wells can be presented in Kuhnian terms as follows:

Pre-science	pre 1930's
Establishment of Disciplinary Matrix	1930's - 1940's
Normal Science	1940's - 1960's
Crisis - recognition of anomalies period of insecurity - development of alternative sets of ideas	1960's - 1970's

13. This view of alternative disciplinary matrices existing in accounting was the subject of subsequent debate (refer later in this chapter).

- identification of schools of
thought 1970's - 1980's
Revolution - domination of the new
practices or ideas Future Development

Wells saw the emphasis on *a priori* research as another sign of crisis within accounting, as accountants sought an alternative, radical proposition to the existing historic cost model. He also held that critics of normative-deductive work did not understand the role of this kind of work in developing alternative views. Wells⁽³⁰⁾ says,

"Far from being unproductive, the works referred to were a necessary step in the revolution currently underway in accounting thought."

and later develops the same theme, stating⁽³¹⁾

"The criticisms fail to recognise the importance of research which leads to the delineation of alternative sets of ideas. Those alternatives are candidates for a new disciplinary matrix; they are the basis of competing schools of thought."

Thus Wells clearly perceives the revolutionary nature of the development in accounting and draws distinct parallels between accounting and Kuhn's view of the development of science. The most important applications of Kuhn's work to accounting can be seen in three areas.

- Firstly, that there are periods of gradual change and refinement with people working within a relatively accepted and established model or framework.
- Secondly, there will be times when exogenous changes will force substantial and rapid change on the existing structure. Whether this implies a revolution in the Kuhnian sense or merely a substantial

shifting of the existing structures is another question. However, this period of substantial change will be marked by insecurity, a feeling of crisis amongst participants, and substantially different models being put forward by members of the community.

- The third application is that research development, theory construction and the entire act of thinking within the discipline takes place and is conditioned by the community's own social, economic and historic environment.

The realisation of the social context of a discipline, whether it be a natural science as specifically referred to by Kuhn or a professional discipline such as accounting, is important. Many writers appear to have considered methodology and method in relative isolation, as a technical subject divorced from the environment in which the participant actually exists. This view is particularly evident among positivist writers. In the natural sciences this view is also prevalent in that many scientists perceive that they can carry out their work separate from the social context. Similarly, some writers in accounting have sought to adopt the same tendency, overlooking the social parameters of the discipline. Wells' application of Kuhn's work to accounting has as its most important attribute the endorsement of accounting as a social discipline. Given this, then research methodology must also be seen to take place within a social context.

Countervailing Views

Wells' work drew strong criticism particularly from Danos who suggests two major oversights. He⁽³²⁾ says that Wells,

"seems to ignore or misunderstand the concept of 'normal' science - a pivotal concept in Kuhn's work Wells misinterprets the critics of a priori research in accounting".

Danos argues that accounting is a social science. It is therefore immature and cannot be considered in the normal science stage as argued by Wells. He notes that Kuhn explicitly excludes immature sciences such as the social sciences from his model. Thus Danos⁽³³⁾ argues,

"accounting, as a social science, is excluded from Kuhn's system; therefore, Wells' analogy is not cogent."

This position is not tenable since Kuhn, in his post-script, suggests that although his work is targeted towards science and that there are differences between the nature of progress in science and art (Kuhn's example), if one considers the criteria of a scientific area as being⁽³⁴⁾:

- relative absence of competing schools,
- the scientific community is the judge of scientific work, and
- puzzle solving as a goal,

then one can well maintain that many of the established social sciences meet these criteria.

According to Danos accounting is not yet at the first stage of becoming a normal, mature science, but is in the growth pangs of science or scientific development itself. He says⁽³⁵⁾,

"What can be anticipated for accounting is not the recurring revolutions of a mature science but the singular revolution of a proto-science adopting scientific methodologies for the first time."

Wells' response was to label Danos' view as trivial and without foundation. Wells⁽³⁶⁾ reaffirmed his original work

with strong arguments, writing

"... only a mature science displays the features of a disciplinary matrix which binds together the community of scholars by a common standard of practice."

Thus Wells argues that accounting displays all the attributes of a disciplinary matrix and thus could be considered to be in a normal science period during the 1940's to 1960's.

The second view put forward by Danos is that critics of *a priori* research are not rejecting theory development *per se*, but are asking for more empirical methodologies to be employed. Only when empirical and traditional scientific methodologies are used can⁽³⁷⁾,

"the pattern of progress envisioned by Kuhn be applicable to accounting."

Danos is effectively arguing that accounting must be deemed to be scientific as a prerequisite for the application of Kuhn's work and that to meet this prerequisite, accounting must display scientific-like thought. Danos erroneously believes that scientific thought must embody traditional scientific method in its origins. Danos considers that scientific method and methodology must be empirically based. Danos' view of *a priori* research being fundamental to the development of alternative disciplinary matrices is rejected by Wells.

Kuhn did not argue for any particular method to be employed within normal science but concentrated on legitimization via the rules of the disciplinary matrix and the process by which knowledge progressed. Thus Kuhn himself did not consider that science could be judged as scientific based solely on whether it used a particular method or

not.¹⁴ Given that accountants are presumably interested in understanding and the derivation of knowledge¹⁵, as are scientists, then there is no cause on this basis for excluding accounting.

However, the principal disagreement between Wells and Danos concerns the stage of the Kuhnian model that accounting is in, rather than the outright applicability of the model to accounting. Despite his earlier points, Danos appears to accept that accounting is not excluded from the model merely because it is not scientific in the traditional sense. In fact, Danos⁽³⁸⁾ considers that accounting may develop according to the Kuhnian pattern, once

*"that all important initial revolution
that is a precursor to progress".*

has taken place.

The views propounded by Danos are similar to other commentators on Kuhn reflecting a dissonance on the relevance and application of Kuhn's work. On one hand, detailed criticisms are raised concerning the applicability outside of science, particularly of his developmental model. Yet on the other hand many have scrutinised the stage where accounting fits in the process and criticised the proposition of Wells.

One of the principal reasons invalidating the applicability of the Kuhnian model to accounting is that accounting does not use the principle of falsifiability which, Peas-

14. Since to hold solely to the received view would alienate flashes of insight of such persons as Archimedes or Einstein. Furthermore it runs against the social judgement of scientific progress.

15. Issues of power, ego and domination are developed later.

nell⁽³⁹⁾ claims, is one of the cornerstones of scientific enquiry,

".... the most noteworthy feature of natural science (having) been almost universally accepted."

To claim that the nature of science may be entirely adjudged on the single principle of falsifiability is not only superficial but imposes such stricture on an area that there is probably no area of study that could actually be classified as being scientific. Further, the view that Popper's work is universally or even extensively accepted, must be open to criticism.

A Statement of Accounting Theory and Theory Acceptance

The principal example of an accounting group using the work of Kuhn (as opposed to individual writers) is the work of the American Accounting Association (AAA) in its Statement of Accounting Theory and Theory Acceptance (SATTA).⁽⁴⁰⁾

The application of Kuhn's work to accounting by a professional body (admittedly an accounting academic body) illustrates the wide interest and even acceptance by accountants for the work of Kuhn. The Statement on Accounting Theory and Theory Acceptance also marks a break between the acceptance of empirical methodologies and the wider sociological and weltanschauungen perspective. However, the Committee can be criticised for adopting Kuhn's work uncritically. If shortcomings of his approach were recognised, they were not published in the report.

The AAA had produced a major theory statement in each decade since 1936. From 1936 up to and including the 1966

statement fairly traditional views were expressed.¹⁶ The 1977 statement attempted to deal with methodological questions compared with the more pragmatic orientation of earlier reports. It was therefore dramatically different to the earlier ones and was described by Hakansson⁽⁴¹⁾ as,

"a sharp turn to the left."

SATTA did not attempt to generate a universal theory for accounting and in fact the report states at the beginning that⁽⁴²⁾,

"a single universally accepted theory does not exist at this time. Instead a multiplicity of theories has been and continues to be proposed."

The Committee justified this on the grounds that there are many different user views and environments requiring different information to meet different needs. In saying this the Committee appears to have confused the output of the system with the methodology of the system itself. It is quite feasible for an underlying single system to provide a range of outputs for groups or users quite diverse and even opposed in their needs. For example, the management accounting system may provide for internal planning and control of production, information for marketing personnel, the data for external financial reports, as well as meeting taxation and other government requirements. Thus the features described by the Committee do not preclude a base system of accounting. The Committee sought a general theory that was encompassing enough to cover the scope of specific theories and detailed enough to provide guidance for policy makers. From a discussion of the then current state of accounting theory and the various approaches to theory construction used in accounting, the

16. Although at the time there was substantial comment concerning the 1966 statement.

Committee⁽⁴³⁾ concludes,

"all these factors suggest that changes in the process of theorising in accounting may be more revolutionary than evolutionary such a perspective was developed as a general view of science by Thomas S Kuhn in 1970."

The Committee develops these views as they apply to accounting arguing that there are several competing disciplinary matrices. The report⁽⁴⁴⁾ particularly notes the act of faith whereby individual workers adhere to a disciplinary matrix until there is a substantial switch,

"defenders of a particular paradigm are forced to rely on persuasion rather than logics or empirics in attempting to defend a proposal."

The Committee concludes that until a broader acceptance of an individual disciplinary matrix or theory is reached, then there can be little aid in the policy making of accounting from the theory area. They say⁽⁴⁵⁾,

"..... until consensus paradigm acceptance occurs, the utility of accounting theories in aiding policy decisions is partial".

However, a parallel with other disciplines is drawn; accounting is not alone in having a confusion of theories and lack of a general acceptance of an overriding theory. The Committee⁽⁴⁶⁾ claims that this will not continue for too long,

"this limited theory role will not necessarily persist in the long run, nor is it unique to accounting. "

Thus SATTA draws a strong analogy between the present state of accounting theory and the process of disciplinary matrix acceptance as described by Kuhn. The Committee relates the search for new disciplinary matrices to the search for new theories of accounting via normative and

empirical methods. Those working to shore up and modify the historic cost model are compared to scientists working within the existing disciplinary matrix, perhaps ignoring anomalies or attempting to rationalise them within the existing model. The linkage of Kuhn to accounting is summarised by SATTA⁽⁴⁷⁾,

"The revolutionary perspective of science is applied to accounting as a plausible means of interpreting the current condition of accounting theory. There are a number of people offering different paradigms. A few have been converted to each of the paradigms but there is no consensus at the present time."

SATTA sees three possibilities for alternative disciplinary matrices as being three basic approaches to the analysing of accounting information, specifically classical models; decision-usefulness models; and information economics.⁽⁴⁸⁾ Interestingly SATTA does not consider that any particular disciplinary matrix will naturally and automatically lead to a dominant consensus, thus they see the possibility of a continued period of uncertainty and crisis. The Committee's work was rather more descriptive than prescriptive but it nevertheless marks in a most emphatic manner the importance of Kuhn's work.

Hakansson was critical of the way in which SATTA applied the Kuhnian model to accounting. His primary criticism is that the three approaches noted above could not be considered as alternative disciplinary matrices. He argues that there is only one single disciplinary matrix in existence, if any, at the present time, stating⁽⁴⁹⁾

"If there is a paradigm in accounting it would seem to me to have to be closely related with the structure of modern corporate accounting: a focus on assets, on claims to these assets and on periodic changes in both, with each dimension associated with a unique standardised

number. One might argue that this paradigm took hold in the last century and reached its zenith in the 1930's, 40's and 50's."

Hakansson reviewed the discussion and criticism of the accounting model that took place in the 1960's and concluded that much of the problem rests on the way in which single numbers have been associated with items in the Balance Sheet for example. The fundamental problem is with the double entry system rather than with the matching-attaching process as discussed in SATTA. He says⁽⁵⁰⁾,

"I am more inclined to interpret the problem more broadly, as caused primarily by the shortcomings of relying on the single-number (nominal currency points) estimates to which the double-entry system naturally leads us. (This property of the paradigm can also be viewed as directly responsible for 'the allocation problem',...)."

Although Hakansson argues that the critical problem with accounting lies with the double entry system, the crux of the problem is the way in which it is applied rather than a fundamental problem of the income measurement, income recognition, matching, periodicity, conventions that underlie the system. Hakansson therefore distinguishes between the technical aspects of accounting and the more conceptual level of accounting theory. As a corollary, he sees the three approaches discussed by SATTA as no more than differing groups within the disciplinary matrix attempting to resolve certain anomalies⁽⁵¹⁾,

"Each of these approaches has had only modest success and it seems much too early to think of them as alternative paradigms. The 'old' one has not come close to being overthrown and may yet be repaired."

Hakansson questions the Committee's choice of alternative approaches, maintaining that other approaches such as

portfolio theory may also be useful. This is argued although it does not constitute a disciplinary matrix in its own right, but merely a differentiation and an extension of existing views within an existing body of thought (this may or may not be a disciplinary matrix).

Overall therefore, Hakansson⁽⁵²⁾ does not subscribe to the validity of transposing the Kuhnian model to accounting,

"While plausible, Kuhn's (descriptive) model has not, however, been systematically verified."

Other Criticisms of SATTA

There has been much discussion in the literature following the 1977 Statement. Hakansson argued that the Committee was not able to operate adequately within its terms of reference since, as it was required to consider accounting theory literature, it needed to demonstrate failure of accounting theory and accounting ideas and that, he says⁽⁵³⁾, is a

".... tall order, apparently taller than anything such a committee could reasonably hope to satisfy".

He criticises the normative direction of the Committee. Despite widespread use of normative research in accounting (particularly in the last thirty-five years) and the empirical support possible via statistical and mathematical analysis, this approach has not led to any significant advance in accounting theory. Hakansson⁽⁵⁴⁾ states,

" ... despite a high level of activity, the normative research of the last thirty five years and our recently initiated formalisation of empirical research have not yet led to any major advances in accounting knowledge."

Hakansson's view is that neither the empirical (inductive, traditional, scientific method approaches) nor the deduc-

to-normative (including the approaches of Popper and Lakatos) approaches have provided any real benefit for accounting. Hakansson effectively brought into question the nature of methodologies employed in accounting and whether accounting has progressed.

Hakansson criticised the Committee's view that theory closure is an important end. He says the Committee overstates the importance of theory closure⁽⁵⁵⁾,

"The Committee apparently believes that the rest of us equate theory closure ... with some kind of utopia. The evidence, please. Furthermore, while utopia may be worth a visit, whoever said utopia was an interesting place to live?"

Although it is desirable to achieve closure in an area, closure implies a system which is all-embracing and which will stand firm through time. This utopia is probably unachievable.

It is interesting to note however that both Hakansson and Wells share the view that something akin to a disciplinary matrix of accounting was developed by the 1940's.

The dichotomy between science and non-science, or science and social science, is the basis of Peasnell's criticism of SATTA. Peasnell⁽⁵⁶⁾ doubts whether it is appropriate to apply Kuhn's work to accounting since accounting does not have the attributes of a science,

".. we can treat accounting as a service activity. ... It is, to my mind, a major mistake to treat accounting as a science."

Furthermore, he argues that the various theory approaches that the Committee discussed do not constitute separate disciplinary matrices, merely separate views that exist within a single disciplinary matrix. In developing this

argument, Peasnell argues that writers such as Edwards and Bell, Chambers, and Sterling, are not working in discrete, separate areas, but rather their work and views should be seen as overlapping. Only at a superficial level could one say that the work of Chambers is clearly distinct from these other writers and therefore exists within a separate disciplinary matrix. In fact, Peasnell argues that the reason for suggesting the works fall under separate disciplinary matrices has more to do with classification than fundamental or philosophical purposes. He says⁽⁵⁷⁾,

" to do so would tend to blur the distinction between the classical and decision-usefulness approaches integral to the picture they (the Committee) paint of paradigm conflict."

Further,

"To do so would be to say, in effect, that it is possible to 'belong' to more than one paradigm at the same time; and this will surely not do."

Of course, the latter refers to persons not being able to encompass the views of two competing disciplinary matrices at the same time. If one was able to encompass two disciplinary matrices at the same time, then the classification as alternative disciplinary matrices is inaccurate and what is evident are sub-views within an existing disciplinary matrix.

Peasnell considers the Committee's view of accounting literature a highly parochial one. The Committee concluded that there is little classical literature, but their search did not extend beyond the United States and was less than thorough even within the United States.

Peasnell's criticism of the Statement on Accounting Theory and Theory Acceptance is twofold. Firstly, that a poor case is made for the existence of competing disciplinary

matrices and from the evidence an argument can just as readily be made for their being a single disciplinary matrix. Secondly, that the Committee fails to demonstrate there to be continuing literature within an existing disciplinary matrix.

The essence of Peasnell's criticisms is that Kuhn's work should apply to science, and only to science, whereas the Committee believes it can be applied to accounting. Peasnell⁽⁵⁸⁾ says,

"... it seems to me that Kuhn's theory of the nature of scientific revolutions is intended to apply only to sciences, whereas the Committee is of the opinion that it can be extended to cover accounting as well."

Whether an area is scientific or not confounds the question of material over method. Peasnell, as do many other writers in the area of accounting, considers that it is material that defines the nature of the study rather than method or methodology. Thus to Peasnell accounting is non-scientific because the material of accounting is dissimilar to that of the traditional natural sciences. He does however suggest that accounting may be at a pre-disciplinary matrix stage and may enter a scientific phase at some subsequent time.

SATTA can also be criticised for its interpretation of a disciplinary matrix. The Committee⁽⁵⁹⁾ states,

"accounting theorists do not have a shared paradigm."

This implies that the Committee considers a disciplinary matrix to be a theory or position taken within a discipline. However, the nature of a disciplinary matrix is that it encompasses the entire discipline including the social value system, borne out by the upheaval of disci-

plinary matrix shifts. Thus when SATTA considers that accounting does not have a shared disciplinary matrix, it is saying that accountants do not share any particular set of values, exemplars, methods and conventions. However there is much evidence to the contrary. Since the 1940's accounting as a discipline has been remarkably robust, exemplars/values have been well developed, social, political and legal structures have developed within the discipline, there has been wide acceptance by forces and factors outside of the discipline. Many of the criteria used to determine whether a disciplinary matrix exists are fulfilled.¹⁷ While refraining from the specific application of Kuhn's revolutionary nature of progress to accounting, there is a strong case that a disciplinary matrix does in fact exist.⁽⁶⁰⁾ The disciplinary matrix in accounting is bound together more by accounting conventions than the techniques. This is consonant with accounting fulfilling a service function as being⁽⁶¹⁾,

"the process of identifying, measuring, and communicating economic information to permit informed judgements and decisions by users of the information."

This definition emphasises that accounting is a process and should be seen as neither an institution nor a series of structural relationships. Accounting is about communication between individuals of certain economic events. The theory that binds this activity is currently the conventions, which have grown out of the practice of accounting. It is this process which determines the disciplinary matrix of accounting.

Weltanschauung and Kuhn

Despite the work relating Kuhn to accounting, the essential ingredient of Kuhn's work that is important to the

17. See earlier discussion by Wells and Hakansson.

study and understanding of accounting has been largely ignored, as critics have generally focussed on the 'technical' and 'applied' aspects of his work. The essential ingredient is the disciplinary matrix and not the revolutionary development process. It is the social construct and parameters of the discipline, encompassing the techniques, methods, as well as values and social elements, that is so important to the definition of the discipline of accounting.

The recognition that accountants are merely a social grouping, in other words, a number of people operating together, generally in concert, driven by the normal failings and strengths of individuals and not anchored by any underlying laws (as perhaps in physics or astronomy), that is important for the applicability of Kuhn's work.

The primary importance of the disciplinary matrix is that to recognise development and the increase of knowledge in accounting, one must recognise the importance of the social structures within accounting. In some situations, arguments resorting to technical merit may have less strength than arguments which relate to politics and power.¹⁸

The Disciplinary Matrix and Political Intervention

Yet the nature of the discipline of accounting is that accountants are constrained by the political, legal, social and economic environment and accounting is in a state of constant change, adjustment and development. Thus there are no fixed relationships, as the physicists may deal with, and to ignore this is to ignore the nature of

18. In later writings Wells has emphasised to a greater extent the role of the disciplinary matrix but this is something of a response to criticism.

the subject matter itself. Were accounting to be treated as having concrete subject matter, then this would not be accounting as we know it.

On the basis of the disciplinary matrix and the theory of revolutionary change Kuhn⁽⁶²⁾ says,

"One of the strongest, if still unwritten, rules of scientific life is the prohibition of appeals to heads of state or to the populace at large in matters scientific ... The group's members, as individuals and by virtue of their shared training and experience, must be seen as the sole possessors of the rules of the game or of some equivalent basis for unequivocal judgements."

Yet Kuhn's statement above might just as easily apply to the accounting profession, by changing the word scientific (in the second and fifth lines) to accounting. The statement would then eminently describe the process of acceptance of norms by a social group sharing a body of knowledge.

Within Kuhn's model any appeal by members of the disciplinary matrix to persons outside of that community is an admission of lack of consistency and acceptance of standards within the community. Similarly, if an outside body, such as the legislature or government, were to interfere with the progress of a normal science period this would imply that the community was unable to resolve its own anomalies. Accounting and accounting bodies have been facing this situation over the last two decades.

As the accounting function has become increasingly important to society as a whole, there has been a growing demand for accounting to fulfill effectively the functions sought of it. Failure to meet such demand, could mean that rules may be set by government intervention. For example,

there have been direct moves by the accounting profession in the United States to avert the imposition by Congress of rules on the way in which accountants carry out accounting. These moves can be seen in the demise of the Accounting Principles Board and the establishment of the Financial Accounting Standards Board and in particular, the work of the latter in the establishment of the Conceptual Framework. It is quite conceivable therefore that political pressure could result in the imposition of rules from outside of the profession, rather than the establishment of a dominant disciplinary matrix from within the profession. This process would be contrary to the nature of disciplinary development as outlined by Kuhn.

In Kuhn's model, the development of a new disciplinary matrix is based on work of persons within the discipline as a particular set of constructs gradually gain ascendancy. If accounting becomes increasingly prescribed by political or external factors then applicability of the Kuhnian model of the development of knowledge to accounting must be severely limited if not non-existent. Furthermore, increasing political intervention is likely to lead to an ever-widening gap between theorists and practitioners. More particularly, those people working in the conceptual and objectives-oriented area (who make up a group similar in many ways to the scientific community described by Kuhn) could become isolated from the definition of the day-to-day work of accountants. These changes would have three important consequences:

1. a set of rules that have little theoretical basis and are essentially practice oriented;
2. isolation of the thinkers from the doers; and
3. a clear lack of fit between the Kuhnian thesis and accounting.

Whilst it has been argued that accounting is clearly a

socially driven discipline, science itself exists within a political and social setting. The view that some activity of pure science exists separate and objective to the world of humans is naive. Those in the natural science community politicise their discipline just as there are political pressures on accounting. Historically scientists were sponsored and owed part of their life/work to those sponsors.¹⁹

Therefore, the argument of non-applicability of the Kuhnian model on the basis of the political framework or external factors inherent in the accounting discipline is not tenable. The natural sciences are also inextricably tied to a wider political and social community than just the discipline. The community of natural scientists is a social institution subject to all the mores, needs, interaction and discrimination found in any other community of persons.²⁰ Thus the only argument that could separate Kuhn's view of a scientific community from the accounting community would be the subject matter itself, that is, the nature of the item being observed. Chapter Two considered the question of method or material and concluded that it is method and methodology that define science and scientific, not the material. The basis of scientific endeavour is the aim to better understand the world or to advance

19. Pacioli, a mathematician and commentator of particular importance in accounting and who described much of the Italian double entry accounting system, was in this position during certain parts of his life. See Chatfield, H.R. *A History of Accounting Thought*. R.E. Krieger, New York, 1977, Chapter 4.

20. For example, the treatment of Leibniz by Newton (refer Broad, W. and Wade, N. *Betrayers of the Truth*. Century, London, 1983, p. 28).

knowledge²¹ and as such, there is no basis for excluding scientific approaches from accounting. Thus it must be concluded that if the Kuhnian model may be used in the scientific world then it may also be used in the accounting world.

Summary

The discussion of Kuhn's work, particularly by Wells and SATTA and the ensuing debate, has contributed in a number of ways to a better understanding of accounting. These contributions may be identified as follows:

1. Kuhn offered a new view on development and a different framework in which accounting might be seen to develop. These views added a new dimension to the debate on accounting theory. In pluralistic terms the Kuhnian influence can be interpreted as adding another view of the development of knowledge.
2. The vigorous discussion that resulted from Kuhn's work gave new impetus to the debate on accounting theory and its relationship with policy setting and practice. As a result there has been further elaboration of alternative views plus clarification of certain existing views.
3. The further elaboration of alternative views, for example, Laughlin's⁽⁶³⁾ support of Mattessich's axiomatic approach and Danos'⁽⁶⁴⁾ espousal of a scientific methodology, has broadened the perspective on accounting theory development.

21. Whether for personal gain, or more esoteric reasons, or for understanding (or domination of) our environment, science is concerned with increasing knowledge and explanation.

4. Kuhn's work significantly influenced the perception of the context of accounting and particularly, the nature of the setting of the disciplinary matrix. The proposition that the process of the development of knowledge in accounting (disciplinary matrix) is a socio-political process was revolutionary in itself.

and

5. The discussion of Kuhn's work added a new perspective to work in accounting theory and the development of knowledge in accounting. Up until the application of Kuhn's work to accounting, much of the discussion had centred around the nature of scientific enquiry, the work of Popper and the received view. For the first time the debate moved firmly and irrevocably away from the more mechanistic and traditional views of the advancement of knowledge to a more sociological and holistic view of the nature of knowledge and theory. Although this was not the purpose behind the work of Wells, AAA, Hakansson et al, in debating Kuhn's work, in the wider context I consider this outcome to be the primary benefit afforded to accounting by Kuhn's ideas.

Thus we see a shift from the model of traditional accounting and the scientific approach to the gathering of knowledge, towards a more historical and sociological discourse where it is argued that social processes are more important in determining what is 'acceptable' knowledge and what is not. Furthermore, that the community (whether physicists or accountants) is the determinant of rules and mores and adjudication of knowledge claims will not be a dispassionate decision on whether a particular method or process was followed.

The sociological or weltanschauung view of theorising propounded by Kuhn has been built upon and developed within accounting in recent times. Notably, for accountants, the approaches of hermeneutics and critical accounting are more humanistic and make explicit the recognition of the cultural basis of knowledge. These are addressed subsequently.

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CHAPTER SIX

HERMENEUTICS

Introduction

In late 1986 the Accounting Review published a paper by Chua⁽¹⁾ which presented two alternative world views, namely the hermeneutic and the critical. These two views mark a fundamental shift from the traditional accounting model (mainstream under Chua's nomenclature⁽²⁾) towards the sociological via the use of case study, reflecting the 'new' ontological assumptions of accounting and hence their importance. In many ways exposure in such a journal marked a coming of age (albeit to a limited extent) of much of the weltanschauung writings of the 1970's including the Kuhnian debate in accounting literature. This chapter and Chapter Seven address these two alternative approaches.

A number of writers had begun to question the structuralist basis of theorising in accounting from the 1960's on. This change, particularly in the way in which knowledge in accounting is grounded, was brought more into focus in the 1980's by writers such as Tomkins and Groves⁽³⁾, Morgan and Smircich⁽⁴⁾, Burrell and Morgan⁽⁵⁾, Arrington and Francis⁽⁶⁾, Chua^{(7),(8)}, Covalleski and Dirsmith⁽⁹⁾, and Neimark⁽¹⁰⁾. These writers more clearly enunciated alternative views of the nature of knowledge in accounting and its derivation. This has had two major benefits. Firstly, these writers have added to the literature concerning the nature of accounting, in particular the nature of knowledge in accounting and its social construct. Secondly, they have explored alternative approaches to theorising concerning the development and growth of knowledge in accounting.

Although hermeneutic theory is at least 150 years old, it

experienced a resurgence in the 1970's and 1980's particularly in the social sciences⁽¹¹⁾ and has attracted interest from accountants in the last decade. This take-off is partly the result of disenchantment with the scientific approach and awareness of that approach's deficiencies, and partly the result of sociologists positively exploring other approaches to understanding. These other approaches have of course included critical theory and more recently, Foucauldian views. (Refer Chapters Seven and Eight).

This chapter initially backgrounds the hermeneutic view, and then discusses the major ideas of Gadamer and the criticisms of hermeneutics. The implications of hermeneutics for understanding in accounting are finally presented.

Background

Hermeneutics is concerned with textual understanding and interpretation and was originally grounded largely in German discourse of a somewhat philosophical and esoteric nature concerned with the scriptural and other religious writings. However as it has been received within the social sciences it is within a much more usable (and perhaps, practical) form. It is difficult to consider either hermeneutics or critical theory unless one sees it against the backdrop of the revival of Marxism within the social sciences and within accounting.¹ Although the views of Marx have been something of an intellectual game to some writers and have certainly not received widespread

1. Refer to the work of Tinker in particular and increasingly, the use of the dialectic approach and consideration of the issues of social understanding, social struggle and emancipation.

acceptance in accounting², they have nevertheless served to give a focus to a number of alternative views to those of science and positivism. The work and views of Marx have been particularly important for the use of dialectics (obviously a strong support for critical analysis) and for the struggle within society towards freedom and emancipation. Droysen's *Historik*³ was one of the first substantive pieces of work stressing the hermeneutic option and arguing the distinction between the natural sciences and the mind/consciousness and more significantly, that the understanding of issues of the mind is quite different from describing explicit social occurrences. Thus began a tradition of distinction between the natural and social sciences.

Hermeneutics has become concerned with the understanding of social action. It was argued that the explanations (and laws) which could be the focus of the natural sciences were inappropriate in the social sciences and hermeneutics developed as a response to this. The problems of measurement and the difficulties of establishing appropriate experimental controls have been discussed earlier, but the overriding problem when trying to mould the social sciences into the view of science as evident among the natural sciences, is that the driving force behind this view is to reach a body of laws. As Outhwaite⁽¹²⁾ states,

"It is this conception of laws and explanations which is the central

2. It should be noted however that in the United Kingdom there is a group of radical/Marxist writers in the accounting area offering alternative paradigms to that of the traditional accounting model.

3. German philosopher J.G. Droysen published *Historik* in response to Buckle's *History of Civilisation in England*, (1857). (Refer to Outhwaite, W. *New Philosophies of Social Science - Realism, Hermeneutics and Critical Theory*. MacMillan Education Ltd, London, 1987, p. 6).

target we need only consider its massive implausibility as an account of explanation in the social sciences."

In the 1960's and 1970's social scientists seriously pursued the idea of reducibility and sought quantitative data to explain and understand the qualitative as a way to enhance the legitimacy of their developing traditions.⁽¹³⁾ Hermeneutics offered an alternative to the positive, and not merely as criticism or deconstruction of the positive, but as Madison⁽¹⁴⁾ says,

" phenomenological hermeneutics differs from other forms of postmodernism in that it does not seek merely to deconstruct the traditional, metaphysical notions of 'knowledge' and 'truth'; it seeks to provide alternatives to them."

The Origins of Hermeneutics

The principal stream of hermeneutics can be identified in the work of researchers in Central Europe, and particularly Germany, where the methods of textual interpretation were built upon by historical commentators such as Dilthey⁽¹⁵⁾ and Droysen. These views were then taken up into a sociological context (for example, Weber⁽¹⁶⁾) and by others who sourced their views on Heidegger's⁽¹⁷⁾ phenomenological perspective. As well as these, Wittgenstein⁽¹⁸⁾ wrote about language games and the concept that interaction between people can only be understood through the ideas of people and Austin⁽¹⁹⁾ and Collingwood⁽²⁰⁾ contributed ethnomethodological work on language and its structures and forms. All these views come together around a central theme that humans act as a result of desire and not solely in a causal fashion as posited by the philosophy of science writers. Thus to understand social action some form of analysis that does not contemplate laws is necessary.⁽²¹⁾

The term hermeneutics (referring to the interpretation of

texts) has been used since the eighteenth century and initially it was used in the interpretation of religious works. However it has developed to now cover general linguistic understanding. Developments from the early writings of Dilthey and Heidegger have led to the spread of hermeneutics in the search for greater understanding of how humankind interacts. The current usage has expanded even further to encompass ethnomethodology and phenomenology and specifically those areas which involve symbolic interaction.

There are two major theses in hermeneutics - the general which bases any enquiry upon the hermeneutic starting place and thus requires the researcher to take on board the sociological and interpretive reality; and secondly, the special thesis which requires, for certain areas of knowledge, that a specific commitment is made to the hermeneutic thesis. Thus in the first the researcher sees the hermeneutic as the backdrop or tableau within which research is undertaken and in the second, the hermeneutic is an integral and vital part of the research and the researcher's mind-set. Gadamer⁽²²⁾ when discussing the general thesis says,

"Understanding ... shows the universality of human linguisticity as a limitless medium that carries everything, not only the culture that has been handed down through language, but absolutely everything, because everything is incorporated into the realm of understandability in which we interact."

Hermeneutic reflection provides a linkage between the sciences and the lifeworld (lebenswelt) since it dedicates itself to the enunciation of the assumptions and tenets of the science, the abstraction and isolation of the methods of science and also critiques the language justifications of the methods used in science. Gadamer maintains a fairly conventional differentiation between the natural sciences,

the social sciences, and then human sciences (philosophy, aesthetics, cultural history etc). He sees the social sciences being somewhere in the middle encompassing elements of each.

Gadamer's Hermeneutic Position

Hans-Georg Gadamer⁴ has had a major impact on the social sciences by reinterpreting hermeneutics and developing further the nature of social understanding via an understanding of the background to interpretive methods.

The essence of the hermeneutic philosophy and the view of Gadamer is summed up by Outhwaite⁽²³⁾ when he states,

"This process of coming-to-understanding is not a matter of unprejudiced appropriation of an object such as a text, but a 'fusion' of one's own 'horizon' of meanings and expectations ('prejudices') with that of the text, the other person, the alien culture."

Thus an alternative methodology per se is not Gadamer's⁽²⁴⁾ objective but rather he is espousing a different interpretive approach stating,

"The hermeneutics developed here is not, therefore, a methodology of the human sciences, but an attempt to understand what the human sciences truly are, beyond their methodological self-consciousness, and what connects them with the totality of our experience of the world."

4. Gadamer is used as a preferred interpretivist over Schutz since Gadamer de-emphasises the quasi-scientific position of Schutz, especially concerning the nature of the objectivity of the observer. Furthermore Gadamer argues for a more historico-cultural basis for judging theories and propositions. (Refer to Schutz, A. *Collected Papers*. v.1, Edited by M. Natanson, Martinus Nijhoff, Dordrecht, 1962, and Gadamer, H-G. *Truth and Method*. Translated and edited by G. Barden and J. Cumming, Sheed and Ward, London, 1975.).

The significance of Gadamer's argument is that, by the very nature of hermeneutics, one can never know the meanings of a text or of a relationship since the interpretive approach, by definition, will need a limitless number of iterations to 'come to know' what one cannot ever completely know. This therefore removes from the social sciences any idea of knowing and objective reality.⁵

Gadamer argues that one can not talk in terms of objects of research and understanding in the social sciences as one would in the natural sciences. In particular, the social sciences, Gadamer's human sciences, are interested in the traditions of the past and the research is dominated and motivated by the reason for the enquiry. The historical developments and movements through time cause a constantly shifting series of objects such that an object can not exist in itself, but only in the interpretation that is placed upon it.⁶ This is the nub of the difference between the social and natural sciences. In the natural sciences Gadamer argues that we can talk about an object which can be known, even to the extent of having perfect

5. Although this appears at first reading to imply that one can not know anything, it is saying that one can understand within a social framework via a series of approximations. Thus it is not dissimilar to Popper's view of successive approximations to explanation and understanding of reality. Popper explicitly talks of these successive approximations via theorising which gradually move one to a better understanding of reality. Thus at a philosophical level one can make a number of linkages between the views of those who have advocated more radical approaches to knowledge and understanding and those who have taken a more conventional view. (Refer to Popper, K.R. *The Growth of Scientific Knowledge* (1960). In Miller D. (ed) *A Pocket Popper*. Fontana, Great Britain, 1983, p. 171-180, and Popper, K.R. *Truth and Approximation to Truth* (1960). In Miller, D. (ed) *ibid.* p. 181-198.)

6. Refer to Schutz for a more positive view of the interpretive. (Schutz, A. *Collected Papers*. v. 1, Edited by M. Natanson, Martinus Nijhoff, Dordrecht, 1962)

knowledge. However it is not possible, in fact it is irresponsible, to talk of such knowledge of history and of human relations. It is not even possible to speak of the objects, the element itself, to which the research is aimed.⁽²⁵⁾

Thus the hermeneutic is concerned with the investigation and reinterpretation of a partly known reality in terms of the current position and current social structures. Habermas⁽²⁶⁾ summarises this by saying that hermeneutics,

"Discloses reality subject to a constitutive interest in the preservation and expansion of the inter-subjectivity of possible action-oriented mutual understanding."

One can criticise Gadamer for continuing the conventional distinction between the natural and the social, yet at the same time arguing that hermeneutics is scientific without (at the same time) being bound by the limitations of the natural sciences. To answer this question Gadamer⁽²⁷⁾ argues that science *per se* lacks metaphysics (social) and as such a person holding to the natural sciences is like a⁽²⁸⁾,

"temple without a sanctuary, an empty temple, a temple in which nothing dwells any longer and hence is itself nothing any more."

What is needed, according to Gadamer, is the melding of the objective with the moral and social just as Plato did not separate the issues of why things are the way they are from the moral issues of the right way to conduct oneself. This is significant in Gadamer's argument where he sees the increasing domination of science and the alienation of some humans by other humans using science and its product. Gadamer⁽²⁹⁾ states,

"... the fact that with the increasing

mastery of nature, the domination of human beings over human beings is not eliminated but, counter to all expectation, becomes ever greater and threatens freedom from within. A result of technology is that it leads to such a manipulation of human society, of the formation of public opinion, of the life conduct of everyone, of the disposition of each individual's time between job and family, and it takes our breath away."

Furthermore the language used to describe the natural sciences is the language of the social sciences, the language of people, and the meanings of the words are the meanings of the minds of humankind.

The emphasis in Gadamer's work is primarily on the cultural tradition and the cultural basis of understanding and begins with an examination of the question posed, as only by examining the question and understanding its subtleties can one address the underlying issue. He says⁽³⁰⁾,

".. every statement has to be seen as a response to a question and that the only way to understand a statement is to get hold of the question to which the statement is an answer. This prior question has its own direction of meaning and is by no means to be gotten hold of through a network of background motivations but rather in reaching out to the broader contexts of meaning encompassed by the question and deposited in the statement."

In fact Gadamer⁽³¹⁾ goes on to say that,

"Only when I have first understood the motivating meaning of the question can I even begin to look for an answer."

Understanding within hermeneutics still has a dichotomous relationship between the subject and the object and the idea that the interpretive method might be in itself rejected. The existential interaction in communication

might be seen as the essence of communication and interaction between human beings, thus the idea of the interpretive method being objective when this in itself involves an interaction, one of an existential nature, weakens the distinction between subject and object and makes the interpretivist part of the action. Thus negating the notion of any 'arms' length', objective, interpretive method.

The Scope of Hermeneutics and the Subject/Object Tension

There lie within hermeneutics the extremes, from ethnomethodology to linguistic analysis. At one extreme nominalism and phenomenism may be taken to such a relativistic position that any set of words or account of situations is just as good as any other. The other extreme is essentially an empirical study of the linguistics, its components and the elements of speech. This form of analysis may become so abstracted as to be virtually worthless. Within the hermeneutic basis of social theory there are other variations, for example, symbolic interactionism which views social life in a structured sense in which role modelling and the nature of the interactions are represented in social psychological terms and related to each other. On the other hand the phenomenologists attempt to look at cognitive elements such that the data for the analyst⁽³²⁾,

"are the already constituted meanings of active participants in the social world."

This then leads to a sociology of knowledge specifically discussed by Berger and Luckmann⁽³³⁾.

These differing viewpoints can be brought back together as done by Gadamer when he talks about the breaking down of the subject and object and a fusing together of the two such that there is no longer a clear distinction between

them; this being the interpretivist position. Giddens⁽³⁴⁾ sums up the meeting of the observer (interpreter) and the observed (actor) when he says,

"... sociology, unlike natural science, deals with a pre-interpreted world, where the creation and reproduction of meaning-frames is a very condition of that which it seeks to analyse, namely human social conduct: this is why there is a double hermeneutic in the social sciences ... the observing social scientist has to be able first to grasp those lay concepts, i.e. penetrate hermeneutically the form of life whose features he wishes to analyse or explain."

Thus even when the interpreter may wish to exclude the particular views of the subject, as perhaps not fitting the study or perhaps not reflecting a wider view of the subject's group, s/he should still attempt to fairly reflect the views of those being interpreted. Hence the interpreter reaches out into the paradigm of the subject in order to better understand and interpret that which is under analysis. The result of the study is one interpretation of that being observed, not the ultimate picture nor absolute knowledge. A subsequent interpreter from an alternative paradigm would have interpreted the same situation differently such that fusion of the paradigm or gestalts of the subject and the object would result in an alternative middle ground such that interpretations would be different. Notwithstanding the indeterminacy of the analysis, the important aspect is the attempt in an ethnological sense to reach into the relationships of the observed and interpret these as 'objectively' as possible, but realising that objectivity in itself is a myth (unlike some of the earlier hermeneutic writers) and that understanding is a puzzle solving activity.

This approach is clearly important when dealing with complex social interactions and even when dealing with

technical subjects where apparently there are technical answers. For example, in standard setting or budgeting one might argue that the importance of the technical outcome is paramount - the standard or the cash surplus/deficit - but in fact the interpretation of the process, the interaction, is frequently the more significant issue. The causes of anomalies, variations or the meeting of targets are often rooted not only in the technical but also the behavioural.⁽³⁵⁾

When the subject and interpretivist come together then the analyst should be able to slip into the language games and language construction of the subject without being tied to the strictures of his/her own language game and structures, thus enabling interpretation to occur from a phenomenological perspective. Hence the hermeneutic approach dismisses the restriction of meaning to an interpretivist paradigm and requires that the interpretivist places meaning within the interaction of the subject and the interpretivist, in other words, establishing a middle ground where the assumptions and the traditions of the interpretivist are largely left behind. Only in this way can the hermeneutic interpretivist move towards an understanding of the subject.

Thus the hermeneutic analyst strongly criticises the assumptions and perspective taken by the traditional scientist to an objective (so-called) analysis of subject. The hermeneutic analyst is required to become part of the interaction with the subject and to develop an empathy with the language and culture of that person or group.

A critical difference between the ethnomethodological and hermeneutic approaches is the frequent restriction placed on the former of mere description of the subject. Giddens⁽³⁶⁾, in particular, argues that there are in fact two

levels at work when a hermeneutic analysis is concerned. Firstly, the social scientist is dealing with a resource that is able to be participated in and which is able to lead the analyst to meaningful descriptions of social interaction and the activities of people. On a different level or plane however, 'knowledge' that is held by the social subject has no inalienable validity and is open to question and analysis. Thus on the first level we must consider the interaction and views of the subjects to be the genuine article as they can be described. On the second level the validity of the subjects' knowledge or belief claims is a legitimate subject for sociological enquiry and debate.

Criticisms of Hermeneutic Theory

One of the principal criticisms, raised by Habermas in particular, is that the hermeneutic analyst tends to be descriptive and uncritical (in the critical theory sense). This criticism can be justified particularly in the association of hermeneutics with the early religious analysts who were concerned with meaning, truth and even issues of beauty in the work under analysis and hence took on a descriptive and not a critical role. Within hermeneutic enquiry there are diverse positions, one being a description and rediscovery of meaning where the focus is to delve within the language and culture to understand the message, and another position is a view driven from suspicion whereby the illusions and mysticism of the subjects are looked through to discover the underlying motives and purposes. This latter view is clearly the critical end of the hermeneutic perspective and is that which Habermas in particular supports. However Gadamer⁽³⁷⁾ rejects this when he says,

"The unavoidable consequence to which all these observations lead is that the basically emancipatory consciousness must have in mind the dissolution of all

authority, all obedience."

The issue then is whether the researcher neutrally describes a situation (even using an interpretivist approach in a manner akin to the way in which a naive scientist might undertake research) or whether s/he should adopt a deconstruction or critical approach and risk the slide into a lowest order anarchist state⁷, since all order and structure disappears under the deconstruction of ideological relativistic tenets.⁸

There has been a more fundamental dispute, particularly between the critical theorist and the hermeneutist, at a metatheoretic level concerning the nature of hermeneutic analysis and the limits of understanding it affords. Habermas argues that while it is important to see language as an essential and fundamental part of social institutions, since the interaction of human beings takes place by way of everyday language, the language interaction is merely a reflection of the deeper social process. The goal of the observer or analyst is to reach, and come to understand, this social process. Thus Habermas argues that the hermeneutic analyst is superficially analysing the words reflecting the social process and not the social process itself.⁽³⁸⁾ Gadamer⁽³⁹⁾ counters this by saying that the words are all we have and they are the image of the social processes,

7. I use the term lowest order anarchist state to distinguish a state without cultural norms and guidelines in which individuals pursue their own lives as individuals, regardless of others. This is contrasted with a higher order anarchistic state, referred to in this thesis as a pluralistic state, in which individuals voluntarily take on consideration of others while pursuing their own ends.

8. This may be distinguished from a pluralistic state where alternative ideologies exist side by side under a critical but also empathic lebenswelt.

"This does not mean that there is a world of meanings that is narrowed down to the status of secondary objects of knowledge and mere supplements to the economic and political realities that fundamentally determine the life of society. Rather it means that the mirror of language reflects everything that is."

These arguments embody an essential difference between the hermeneutic analyst and the critical theorist. The former holds that the secondary level of information (the language) is all we have to understand the social group. Whereas the critical theorist argues that one must proceed, at the same time as giving substantial weight to the language, by also including the observation of the social activity or process. These alternative beliefs have not been well reconciled by the hermeneutic writers. The critical theorists have adopted this latter position and overlaid it with the critical perspective.

This latter approach is reflected in the consideration of what is termed "systematically distorted communications" (for example, dreams and situations where people say things they do not mean). On these Habermas⁽⁴⁰⁾ says,

"These manifestations can be regarded as parts of systematically distorted communication. They are comprehensible only to the extent to which the general conditions of the pathology of everyday communication are known. A theory of everyday communication would therefore have to beat a path through to the pathologically blocked meaning-context."

One can hypothesise that distorted or pseudo-communication may not be confined to pathological situations, but may be much more pervasive in social institutions than imagined. Ideological distortions can occur whereby words and phrases take on quite unique meanings based on the beliefs of that community - such distortions may be disguised by

their apparent synonymy with the language culture of the hermeneutic analyst. By inference, language may not be what it says! Thus a theory of communication and language will be necessary to guide the interpretation of language. However, the idea that theory may be taken by the interpretivist into the subject area runs against the principle of hermeneutic enquiry - that is, that the analyst and the subject should come together in an understanding via an empathic role of the language content and hence the processes of the social group. Thus, by definition, hermeneutic enquiry does not allow for the metatheory and conceptualisation of language theory from within the analyst's culture and standpoint to impact upon that of the subject. Yet, as Habermas has argued, the language is often not what it seems and is often more deeply rooted in cultural ideology and other manifestations such that one needs to delve deeper into the culture to critically analyse the processes that are occurring. This returns us to the earlier contention that a sceptical and critical approach needs to be taken concerning the language and the social forms, rather than a more neutral (what might be called naive), interpretivist stance.

Thus the essential criticism of hermeneutics is evident - that language is a sub-part of the general social interchange and to reduce analysis of social processes to the analysis of communication itself is a depredation of potential knowledge. An analogy can be drawn between hermeneutic enquiry and 'watching' a video with the picture turned off - much may be learnt from the language and interactions as conveyed by the language, but there are likely to be considerable processes and conditions occurring which are not captured by the language (and may not even be known to be occurring by the actors). An approach is needed which will extend beyond the language and, in the metaphor of the video, turn on the picture - to gain a

further level of understanding which, in itself, will still be restricted by methods, knowledge, time and mind-set.

Hermeneutics and the Scientific Approach

Another tension is that hermeneutic writers still seem to consider themselves scientific but are not clear on the nature of their scientism.⁽⁴¹⁾ Major German hermeneutic theorists of the nineteenth century agreed that the hermeneutic disciplines are *"separate but equal"*⁽⁴²⁾, that is, scientific yet different in kind to the natural sciences. That the text is seen as an objective reality and the understanding of it is via an interpretive methodology has clear shades of the induction of the positivist. These early ideas that texts had a realism, 'naive realism', about them have gradually been diluted towards the twentieth century and the current view that the text is itself a series of layers describing the social relationships underpinning them. Heidegger⁽⁴³⁾ commented on this view of the meaning of words and the use of language as a neutral reflector of facts and reality, and argued that as there becomes a less clear subject-object distinction then interpretation becomes much more important.

Gadamer⁽⁴⁴⁾ directly addresses the need to approach the subject in an open fashion, learning from the subject and continuing to change one's own views such that greater understanding of the text is reached,

"It lets prejudices which catch only a part of the work die off, while letting those emerge which make possible a true understanding."

Schleiermacher⁽⁴⁵⁾ says that the language is the

"product of (the author's) personal idiosyncrasy."

This requires a view of hermeneutics that deals with the

empathy between the interpreter and the subject and of a deep relationship between the two. Thus differentiating itself from the positivist tradition of the objective observer. This approach becomes less 'scientific' and increasingly an art form. As Connolly and Keutner⁽⁴⁶⁾ state, recent change

"moves interpretation toward the general vicinity of the fine arts rather than the traditional sciences ... it is certainly true that Schleiermacher stresses the role of a kind of interpretive artistry and the need for a special affinity between interpreter and author ..."

Thus the hermeneutic analyst exists in an indeterminant world, somewhere between the objectivity of the words (text) under analysis and the need for a critical appreciation of them, and the empathic ethnomethodological approach and that of the biased observer.

A telling comment on hermeneutics is made by Calvino⁽⁴⁷⁾ when he states,

" .. the spirit in which one reads is decisive: it is up to the reader to see to it that literature exerts its critical force, and this can occur independently of the author's intentions."

The key element of the interpretivist view is the way in which these issues are dealt with and the reality of the analysis that the interpreter brings into play. To be a naive hermeneutic observer is to believe all that is observed, but to screen the observed is to impound one's own prejudices on the analysis. Somewhere a middle path is needed, anchored in empathy but not ignoring one's own paradigm nor a critical perspective.

Accounting and Hermeneutics

The implications of the preceding discussion for science

and accounting may now be drawn. Clearly there exists much tension in the hermeneutic form of analysis between the issues of independent observation (at which point the hermeneutic analysis comes close to the natural scientific approach) and empathic/ethnographic involvement (in which the analysis becomes a melding of the interpreter's and the subject's world). The latter is claimed to offer a much fuller account and understanding of the group/individual under scrutiny. This fuller understanding offers the potential for a greater insight into how accounting numbers are used within organisations; this leads to a reappraisal of the role and place of accounting information⁽⁴⁸⁾ (particularly the view of accounting as a neutral system); and then the way in which the accounting model formalises social systems and presents them in an objective fashion; and finally a realisation that accounting information means different things to different people.⁽⁴⁹⁾

Hermeneutics brings into focus the need not only for observables to be classified and measured but, to meet the purpose of the analysis, they must also be understood. This greater understanding of what is behind the proxies that we use so freely in accounting is the importance of hermeneutics for accounting. Therefore we see a mitigation of positivism via interpretivism.

The implications of these factors are several and far reaching. Firstly, the interpretivist viewpoint offers an alternative form of analysis based on a social interaction and language perspective that is much broader than that of the traditional scientific analysis. Secondly, it may also allow a more penetrating analysis of what is occurring in organisations and of the role of accounting. These factors are of course to be applauded. However the major criticism is a direct result of the method, that is, the lack of

anchoring that any relativist analysis must incur. Such issues as the meaning of words, the perspective of the interviewer, the paradigm from which the research is written up and the lack of replicatibility, leave any results open to substantive criticisms.

Conclusion

The hermeneutic form of analysis directly addresses problems faced by the scientific approach, namely those of: the need for a more empathic model to analyse social interaction, the theory dependence of observation, and the structural/causal model that the scientific approach posits. However, in dealing with these issues, the hermeneutic/interpretivist analyst becomes freed of structuralism in a realist trap and the meanings of words become liberated such that words may connote anything. These issues may be addressed in three ways. Firstly, by a resort to a post-structuralist paradigm where the interpretivist approach is anchored within a new meta-structuralist model that subsumes the interpretivist approach something like the scientific approach. Or, secondly, by a critical perspective where deconstruction and internal analysis is *de rigeur*, or thirdly by a realisation that relativism and belief is all that there is and we make the break away from our structuralist roots to a form of pluralism.

The next chapter will look at the critical alternative and then the final chapter is what I call the mature postmodern, or pluralism.

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CHAPTER SEVEN

CRITICAL ACCOUNTING

Introduction

Tinker⁽¹⁾,⁽²⁾, Chua⁽³⁾, Arrington and Francis⁽⁴⁾, Laughlin⁽⁵⁾ and Hoskin and Macve⁽⁶⁾ in particular have advocated a critical approach to the development of knowledge in accounting. It is to this critical approach that this section is directed.

Critical theory provides an intellectual bridge between the structuralist view of the positive thinkers, particularly as distinguished by those of the Vienna Circle¹, and the pluralistic and postmodern views of such writers as Feyerabend and Lyotard.² The perspective does not provide a method or methodology for research, but a dialectic and

1. Refer to Held, D. *Introduction to Critical Theory - Horkheimer to Habermas*. University of California Press, U.S.A., 1980, p. 189-190.

2. However there are no clear boundaries between critical theory, deconstruction, postmodern, and pluralism, and the writings of the various authors tend to flow across these labels from one to the other. Macintosh notes several of the different themes within the postmodern. (Refer to Macintosh, N.B. *Accounting and Deconstruction: A Postmodern Strategy for Reading Accounting*. Unpublished paper, Queens University, Kingston, Canada, August 1989, Epilogos, p. 46-48.)

Deconstruction and reconstruction should be distinguished. Macintosh, and Arrington and Francis demonstrate the use of deconstruction to go behind the meaning of language and to dissemble meaning and claims to privilege that the text contains. The difference between deconstruction and reconstruction is that the deconstructionalist does not reconstruct theory within a new form given new parameters. An example of reconstruction is that of Habermas, when Habermas reconstructed Marxist ideas by freeing them from the nineteenth century. (Refer to Pusey, M. *Jurgen Habermas*. Tavistock Publications Ltd and Ellis Horwood Ltd, London, 1987; Heller, A. *Habermas and Marxism*. In Thompson, J. and Held, D. (ed) *Habermas: Critical Debates*. MacMillan, London, 1982, p. 21-41.)

Socratic approach for the evaluation of knowledge claims. Thus, in general terms, it does not privilege empiricism over the qualitative nor vice versa. The only ideology (to generalise within an introduction) that is fundamental to critical theory is a belief in humanness and the concomitant emancipation of humankind, and that the latter is achieved through dialectics. Critical theory provides processes for the consideration and evaluation of claims (typically knowledge claims). Hence it may be used for the evaluation of scientific enquiry as well as for human enquiry and thus may be seen to bridge the modern and the postmodern.

Critical theory is important to the study of the application of the scientific approach in accounting. The scientific approach (and structuralist views) has been an important element in much of the debate generating critical views. The role of science in the emancipation of humankind through the Industrial Revolution and the early twentieth century, and later, its role in the alienation of certain groups of people provided critical writers with fertile ground for the extolling of a critical approach.

Critical Theory

The work of members of the Institute of Social Research founded in Frankfurt in 1923 (known as the Frankfurt School) developed what is known as critical theory.³ Prominent individuals in this development were Adorno,

3. Marcus and Tar, and Held review and summarise the general characteristics of critical theory and the works of the Frankfurt School members. (Marcus, J and Tar Z. (ed) *Foundations of the Frankfurt School of Social Research*. 2nd edn, Transaction Inc. U.S.A., 1988; Held, D. *Introduction to Critical Theory - Horkheimer to Habermas*. University of California Press, U.S.A., 1980.)

Horkheimer, Marcuse and more recently, Habermas.⁴ Although the work of the School, by bringing together an analysis of social, political and economic theory provided the basis for what is known as critical theory, critical theory is nevertheless⁽⁷⁾,

"a diverse and to a certain extent, disparate set of ideas."

Despite the multiplicity of approaches and nuances that can be termed critical theory, there are certain dominant characteristics and concerns that anchor critical theory.

Laughlin⁽⁸⁾ aptly summarises the goal of critical theory when he says,

*"The primary concern of all critical theorists was, and still is, with an historically grounded social theory of the way societies and the institutions which make them up, have emerged and can be understood. Interpretation is never for its own sake but forms part of the important understanding which can allow some desired 'transformation' of societies ... so that a 'true, free and just life' can be assured. ... theory becomes the vehicle for an historically grounded interpretation and transformation to occur.
.....*

It is the view that the present is not satisfactory, ... and that the methodological aspects of critical theory can create this improvement which marks out this thinking as essentially 'critical'."

Theory then provides the means for understanding 'reality', from which that understanding can be translated into progress and development of societies which will enable "a

4. The works of Adorno and Horkheimer are reviewed by Tar, Z. *The Frankfurt School: The Critical Theories of Max Horkheimer and Theodor W. Adorno*. Wiley, New York, 1977.

truer, freer and more just life for all."(9)

At the same time, critical theory admits the significance of subjective factors in knowledge acquisition and understanding. As Held⁽¹⁰⁾ states,

"Critical theory does not downplay structure, but seeks to examine the interplay between structure and social practices, the mediation of the objective and subjective in and through particular social phenomena."

The critical theorist considers a particular proposition within its social, temporal, and power context in order to better understand its nature. Held⁽¹¹⁾ sums up the process⁵ of enquiry pursued by a critical theorist when he says,

"...to analyse a work of art, or a particularly cultural artifact, is to analyse and assess the way it is interpreted. This entails an inquiry into its formation and reception. Such an inquiry seeks to understand given works in terms of their social origins, form, content and function - in terms of the social totality. The conditions of labour, production and distribution must be examined, for society expresses itself

5. The process in more detail is described by Held as,
"1. through the explication of the constitution of ideas in consciousness and interaction, in the dialectics of experience;

2. through the analysis of the creation, maintenance, and change of people's inter-subjective, historical concepts;

3. by refusing to ignore and smooth over contradictions and contradictory claims at the phenomenal level;

4. by leaving open the possibility of a critically reflexive understanding of history and tradition. It must not only accept the importance of an understanding of the meaning structure of tradition, but also recognise that tradition must not be idealised. For it might also embody interaction based on deception and distortion (ideology)."

(Held, D. *Introduction to Critical Theory - Horkheimer to Habermas*. University of California Press, U.S.A., 1980, p. 173).

through its cultural life and cultural phenomena contain within themselves reference to the socio-economic whole."

Held⁽¹²⁾ goes on to say,

"... a theory of culture should include, on Horkheimer's and Adorno's account, reference to the processes of production, reproduction, distribution, exchange and consumption."

This clearly contrasts with the positivist view of the world where the natural elements may be seen to define the reality. Certainly Comte sought to understand reality through an understanding of the observables, thus creating a rational, systematic world where objects could be defined in mathematical terms and their relationships could be explicitly defined and determined.

The goal of critical theory is to make judgements between alternative views of reality and to uncover ideologies. Hence the critical theorist deals with the social aspects of interaction, subjectivity and change, which are at best only crudely measured by the positivist model.

Emancipation

Critical theory views institutions from an historical and social perspective. The contextual elements of change or transformation are seen as just as important as the change or progress itself. Furthermore, the critical theorist sees an essential link between theory (or understanding) and social change or progress. Criticism of the *status quo* and the imperative for change to a 'better' life or society, set critical theory apart from earlier theorising. This transformation, or emancipation, is a fundamental objective of critical theory.

Horkheimer⁽¹³⁾ on critical theory said,

"It is not just a research hypothesis

which shows its value in the ongoing business of men; it is an essential element in the historical effort to create a world which satisfies the needs and powers of men. However extensive the interaction between the critical theory and the special sciences whose progress the theory must respect and on which it has for decades exercised a liberating and stimulating influence, the theory never aims simply at an increase in knowledge as such. Its goal is man's emancipation from slavery".

Horkheimer believed fundamentally that society and human-kind were not as they should be and that emancipation and the avoidance of alienation could be achieved through change.⁶ Along with Adorno, Horkheimer argued that changes in social reality occurred when criticism of social reality and its nature took place. Social reality was then allowed to change and hence develop into a more 'natural' state. This immanent⁷ criticism was referred to as a methodology of negative dialectics whereby the negative aspects of reality were put in conflict and compared to the ideal concept, thus providing the basis for a move towards a greater alignment with the natural state.(14)

The theme of alienation is pursued by Marcuse. He saw through history the repression of the individual and in particular, repression of the potential of the individual to achieve, both for him/herself and to develop a better world in general. This repression meant that the spark of achievement is virtually extinguished. Although the Hegelian and Marxist arguments saw this repression as physical as well as economic, Marcuse saw this domination as a function of the capitalist industrial life and the consum-

6. While he was younger, Horkheimer actually believed that such change in society was imminent.

7. Immanent is used here to mean fundamental, or the very nature of something.

er society, including advertising and promotion.(15),(16) Thus Marcuse held that the individual was repressed by society at large and that the dominating views were the views of a small group of power-sharing individuals. For example, science and the role of positivism. It has already been demonstrated that positivism was held by many to be the basis of true knowledge and that this adherence led to an intellectual repression of other views and schools of thought. Thus the epistemology of positivism has become privileged over that of others.(17)

Habermas'(18) contention was that positivism, which had begun and developed as an epistemology, had turned through time into no more than a method of science. It had therefore lost the philosophical underpinnings and reflections which had grounded it. This led Habermas to his second thesis, that the use of positivist principles within the social sciences led to a manipulation of human beings and an alienation of people from the sources of capital in capitalistic societies.

The enlightenment of Horkheimer and Adorno was marked by the dominance of science over myth and religion. This is very similar to the Hegelian view whereby scientific consciousness prevailed within the intellectual world and thus led to the control and exploitation of nature whereby nature is a utility available to humankind. Within this view theorists perceive a neutral natural world, separate and distinct from that of the human being.(19) Horkheimer and Adorno held that humans would dominate nature via their understanding of nature and from that, they would dominate other people. Hence the flow from emancipation to control and alienation. They(20) said,

"Matter would at last be mastered without any illusion of ruling or inherent powers, of hidden qualities."

Nature was seen as a realm of objects, and consciousness and purpose were seen as the marks of humans who put nature to use. The natural has no value in itself as it has no significance, unless it is of value and significance to human beings. Thus the utility of nature is gained only from the usefulness to which it might be put.

The idea of domination and of emancipation from natural control is seen as a logical outpouring of the problems of the Industrial Revolution and the desire to create a world where humans would not be controlled as a result of their alienation from the means of production and hence power. Thus the domination of nature and the importance of science and scientific developments were critical to the emancipation of the ordinary person. At a higher level, the uncovering of ideas, of knowledge and understanding, was itself emancipatory as when knowledge replaces myth, then⁽²¹⁾,

"Man imagines himself free from fear when there is no longer anything unknown. ... The pure immanence of positivism, its ultimate product, is no more than a so to speak universal taboo. Nothing at all may remain outside, because the mere idea of outsideness is the very source of fear."

The domination of nature then sets the scene for the emancipation of humans.⁸

8. A parallel view is held by Nietzsche in his argument that knowledge is a power tool. Nietzsche saw that the traditional views of religion were undermined by the scientific and technological progress and developments in the nineteenth century. He also argued that interpretation of the world lies not in the objectivity of the observed but in the need to interpret. This flows into Nietzsche's key concept, that domination becomes an end in itself and the overall objective of humankind. (Refer Nietzsche, F. *The Will to Power*. Edited by W. Kaufmann, Vintage Books, New York, 1968, p. 266-267.)

Underlying critical theory, therefore, is the desire to expose repression, whether it be of capital, physical, intellectual or ideological. By using a critical approach the theorist can develop a methodology for understanding which in turn will generate the necessary change for emancipation.

The Views of Habermas

According to Pusey⁽²²⁾, Habermas follows a philosophical tradition that,

"has its roots in classical Greek philosophy and that stretches from Kant to Hegel and Marx."

Habermas argued that fundamental philosophical arguments be reconstructed with the object of deciding just how knowledge may be determined via a situation similar to a judicial hearing. This idea dates from Kant⁽²³⁾ who said,

"Reason must approach nature with the view, indeed, of receiving information from it, not, however, in the character of a pupil, who listens to all that his master chooses to tell him, but in that of a judge, who compels the witnesses to reply to those questions which he himself thinks fit to propose."

This concept of discussion and criticism, so that views are maintained not by dogma or ideology but by reason and dialectics, is fundamental to critical theory.

On the question of positivism, Habermas⁽²⁴⁾ considered that knowledge, and in particular the growth of knowledge, could only assume its rightful and proper place as one of the fruitions of reason when it is subjected to tougher epistemological standards. Only by so doing can the knowledge gained be judged with reference to its claims.⁽²⁵⁾ Thus, pursuing Kant's metaphor of the court, Habermas is arguing for a restoration in the position of the judge and

in the case of positivism, contending that positivism has effectively dismissed the judge or bought him/her over.⁽²⁶⁾ If one is to maintain that positivism is the only way and positivism employs the judge and sets the criteria, then everything is evaluated from one perspective.

Habermas⁽²⁷⁾ goes on to argue that science and scientists are arrogant in their belief that all knowledge may be reduced and understood by science when he says,

"that is, the conviction that we can no longer understand science as one form of possible knowledge, but rather must identify knowledge with science."

He argues that the judge may alter the basis upon which judgements of the validity of knowledge are made. In particular, the epistemological criteria must be more clearly enunciated and considered and only then will the authority of the judge be restored. Habermas argues that there is no one law, so there should be no reason why there should be only one method. Thus the judge must make decisions upon knowledge claims using the epistemological criteria that resulted in those claims. To move to the stronger epistemological standards, Habermas looks to the critical reconstruction of Kant, Hegel, Marx, Freud and Nietzsche, attempting to avoid what Pusey⁽²⁸⁾ believes could,

"cumulatively lead to the bankruptcy of reason in modern philosophy and science."

The importance of these epistemological criteria can be most sharply seen when comparing the observation tenet of positivism with the lebenswelt of Habermas.

One of the tenets of positivism is that observation is seen as being value-free thus giving the researcher a privileged position from which to view the

subject.⁽²⁹⁾,⁽³⁰⁾ I have already demonstrated that observations are not value-free, rather they are moulded by history, society and the weltanschauung. To this Habermas adds the concept of lebenswelt, the idea of lifeworld, which is the underpinning of the worldview. This lifeworld sees social and economic structures interplaying with action and consciousness and forming the substructure of our conscious worldview. It lies behind the individual and their life.⁽³¹⁾ The lifeworld is summarised by Pusey⁽³²⁾ when he says,

"The lifeworld sets the 'context-forming horizon' of social action and consciousness. To say therefore that this or that social structure is 'institutionalised' is just another way of saying that it structures our conscious actions and worldviews (Weltanschauungen). As we grub our way down through the conscious layers of the lifeworld our every effort at self-understanding sooner or later comes up against its unyielding structural constraints; constraints that coordinate many of our social actions without our knowledge and 'behind our backs' from within those reaches of the lifeworld that lie beyond the threshold of consciousness."

Thus any attempt at self understanding will come up against these underlying structures or beliefs. These include the taken-for-granted definitions and the understandings and beliefs of the world which permeate one's very living; they are the unconscious or subconscious basis to life. Thus there can be no observation privilege outside of the lebenswelt, which means that the observer and the observed interact in a mutual process which takes place within the "expanding horizons of a lifeworld."⁽³³⁾

Habermas' Cognitive Interests

This leads Habermas⁽³⁴⁾ to argue that human interest and knowledge are inextricably intertwined and, concomitantly, that to argue for the value free nature of observation

within positivism is to ignore the fundamental interests and drives of human beings. These drives, Habermas argues, give character and shape to knowledge and to the means by which knowledge is uncovered. Humans will only attempt to gain knowledge which is consonant with their interests, whether economic, social or subconscious drives, that is⁽³⁵⁾,

"knowledge and human interests are inextricably bound up with one another."

Human interest was expressed by Habermas via his enunciation of cognitive interests, these being assumptions of human motivation and goals. One of the principal elements of cognitive interest according to Habermas is that of instrumental control arising from the desire by humankind to wish to dominate the environment, and so survive. We do so via our attempt to master nature through labour and in particular, through the scientific exploration and the empirical analytic work that provides us with a mechanistic rationality of control. This first driving force is the prescribing of nature to our needs and consequently its domination.

The second cognitive interest is language communication and the way in which the language shapes social structures. This is an historical-hermeneutic perspective with the emphasis on understanding and interpreting the organisation of society.

The third cognitive interest is that of emancipation and the overthrow of the alienation and the domination of people. This alienation may be as a result of language, political power, and more recently has not been a result of physical coercion.

Habermas argues that the only epistemology that is appropriate is a methodology that moves beyond its own bound-

aries and is recognised as meeting the needs of the distinctions between three broad groupings of scientific endeavour, each being grounded in particular belief statements. He states⁽³⁶⁾,

"Theories of the empirical sciences disclose reality subject to the constitutive interest in the possible securing and expansion through information, of feedback-monitored action. This is the cognitive interest in technical control over objectified processes.

2. Hermeneutic enquiry discloses reality subject to a constitutive interest in the preservation and expansion of the inter-subjectivity of possible action-oriented mutual understanding.

3. Critical social sciences - notably psychoanalysis and the critique of ideology, are governed, like philosophy, by an emancipatory cognitive interest which operates through self-reflection."

It is to this third cognitive interest which critical theory is particularly targeted. Critical theory is concerned with the expose of ideology - particularly historical ideology - and to⁽³⁷⁾,

"... abolish them both in individual consciousness and social reality ..."

Falk and Gilbert⁽³⁸⁾ trace how the first cognitive interest is extended to the domination of people, that there is a subtle but insidious move from the domination of nature to the domination of people, which has the result of alienating individuals from their basic right to free and responsible action. Thus the epistemology, that of a structuralist model, turns people into the objective of science - society becomes a scientific model and people the object of that model. Thus this instrumentalist view runs against the very nature of social relations. The social sciences become mechanistic, manipulative and play their own role in the alienation of the individual from that person's potential. This then leads to different

language, communications and ideologies which, in themselves, create a social context that dominates and alienates individuals from their potentialities.

Falk and Gilbert argue that one's humanness and personal life can not be avoided in the pursuit of research and in particular, in the pursuit of research via the positive model. When we undertake research we must recognise that we bring with us our values and our past. Falk and Gilbert⁽³⁹⁾ say,

".. 'the most dangerous theorist is the one who says he has no theory'. Our values must enter our work. We are human beings before we are researchers, and our humanness does not suddenly get divorced from our ontological experience once we put on our scientific cloaks. Pure objectivity, even were it possible, would have as its cost that we bore no responsibility for how our work was used."

The corollary is that those who pursue knowledge have a responsibility for how that knowledge is used. A researcher, whatever his/her epistemology, can not stand aside from the research in an abstracted sense and say "the users have made what use they will of a discovery, it is no longer my responsibility".

The Historicity of Knowledge

Habermas follows in some ways Hegel and Marx when he argues that knowledge and understanding are conditioned and mediated by historical experience, and that knowledge is a contextual phenomenon as well as a temporal one. As Anderson⁽⁴⁰⁾ points out, knowledge in the seventeenth century was perceived relative to deity and intertwined with the religious orders of the time. This relativism and contextuality, the critical theorist argues, should be the basis by which theories, hypotheses and knowledge are evaluated. Some abstract position of belief that the

researcher, observer or commentator would bring to bear upon the situation should not be the basis for evaluation.

Habermas⁽⁴¹⁾ says,

"Assumptions about the organisational principle of society and about learning capacities and ranges of possible structural variation cannot be clearly checked empirically before historical developments have put critical survival limits to the test. Evolutionary orientated analyses of the present are always handicapped because they cannot view their subject retrospectively. For that reason theories of this type, whether Marxist or non-Marxist are forced to monitor their assumptions - assumptions that already underlie the delimitation and description of the object - on an instructive theory of social development. Characteristics of society as industrial, post industrial, technological, scientific, capitalist, late capitalist, state monopolistic, state capitalist, totally administered, tertiary, modern, postmodern and so on stem from just as many developmental models connecting the temporary formation of society with earlier ones. In this regard historical materialism can take on the task of determining the organisational principle of contemporary society from the perspective of the origin of this social formation - for example, with statements about the systems problems in the face of which traditional societies failed and about innovations with which modern bourgeois society met the evolutionary changes."

This quotation goes to the nub of critical theory. Firstly it is saying that knowledge and theory should be judged upon the assumptions, conditions, criteria and postulates of that particular theory, that is, it should be judged from within its paradigm. For example, the deconstruction of Jensen's agency theory (as an example of positivism in accounting) by Arrington and Francis.⁽⁴²⁾ The second key point is that these assumptions are contextually deter-

mined and that the knowledge or theory so derived should be judged with respect to the particular community and historical setting in which it has evolved. The third point is that the assumptions of a particular theory or paradigm are themselves derived from previous assumptions and they too grew out of still earlier assumptions. For example, the assumptions we might make concerning users of accounting today may share many similarities with the assumptions regarding users in the 1930's (when George May and others were dealing with the effects of the Great Depression on the accounting discipline) and may well be similar to those of manorial England. However the relative importance and the particular nuances of these assumptions, such as accountability and stewardship, have changed and evolved. We should not presume that views of accountability we hold today can be transposed one for one to the view of accountability held in the 1930's nor to the view of accountability held in the 1400's and 1500's in Europe. Thus the assumptions must be seen within their temporal and social contexts. This is therefore the means by which critical theory stakes its objectives, not on the absoluteness of knowledge *per se*, but in the relative worth adjudicated by its own objectives of knowledge and theory within a particular circumstance.

Knowledge and theory will change and develop in a relativist sense as society changes, as beliefs and prejudice change. Yet at the same time, those things which we hold that we know today, in other words knowledge claims, will change and evolve as we progress through time. Just as society is a dynamic and developing body of people, so too are the knowledge and beliefs of that society. Thus whatever knowledge claim is made should be held accountable within the values of the research community that made up the paradigm of the particular period under examination, and the knowledge claims should be evaluated using the

appropriate epistemological references of that time.

This of course implies that there is a rejection of positivism and in particular of the scientific approach, since the assumptions and ontological conditions of positivism, particularly about the nature of reality, are excluded from the critical perspective. The critical theorist, and Habermas in particular, is not denying reality merely that our perception of reality is the product of the attitudes of the particular community making statements about reality. Thus knowledge claims are dependent upon the beliefs and aims of the researcher and social factors, social prerogatives, underlie any claims to knowledge.⁽⁴³⁾

On the Scientific Approach and the Critical Theorists

The adoption of the techniques of enquiry of the natural sciences and the interpretation of the observed via algebraic and mathematical means, describing a structured world where universality applies, became known as positivism. Comte⁽⁴⁴⁾ sought to explain reality as an objective concept that was uncovered via observation and he sought to dismiss the place of *a priori*. Further, as Held⁽⁴⁵⁾ says,

"... Comte made few distinctions between the methods appropriate to the physical and human sciences."

Comte considered that humans were observables in the same way as the planets or liquid bodies.

Comte argued that social relations could be ordered and controlled by the application of scientific technique. Horkheimer and Marcuse were not entirely critical of this approach since they recognised that the skepticism brought about by Hume's dispassionate analysis of relationships (from a scientific perspective) led to the increasing enlightenment of society. Furthermore, when viewed from an

historical perspective, the Industrial Revolution was a period during which the growth of knowledge within the natural sciences, and the amazing improvement in living conditions and direct benefits to humankind that resulted, was such that the ordinary worker was freed from the drudgery of the treadmill of everyday life.⁽⁴⁶⁾ The problem for the critical theorist is that these developments became increasingly alienatory by way of the use to which they were put and the power centres that resulted. Therefore while much of the critical writings have been aimed at the ideologies of positivism, the critical writers have not ruled out the use of positivism.

The critical theorists, in particular Adorno, Horkheimer and Habermas, consider that only those issues which are amenable to the scientific approach and that are able to be considered in a rationalist fashion, should be adduced from this viewpoint. Horkheimer⁽⁴⁷⁾ went to the nub of the issue concerning science when he argued that the scientific philosophers must,

"set up a criterion for the true nature of science."

And as Held⁽⁴⁸⁾ says,

"Positivist philosophy of science is able to elucidate neither the conditions and limits of its own validity and method nor those of modern science."

Thus although those that argued for the application and use of science argue for validity to be concerned with empirical verifiability for a statement to be meaningful, they are entrapped when it comes to justifying the use of science itself since statements of faith can only be held as true if they are empirically verifiable. A major criticism by Habermas concerning the use of empirical research to judge social developments and relationships concerns the use of prediction. Specifically when prediction of

social factors by empirical research appears to point to some truth, it is merely pointing to lack of freedom within social relationships that has resulted from alienation rather than indicating some law of social relationship.⁽⁴⁹⁾

In summary then the critical theorists see a place for the use of positivism, but in a limited fashion and only to be followed with great care when dealing with human issues and the social sciences.

Critical Accounting

For the area of accounting and particularly for the application of the scientific approach to knowledge gathering in accounting critical theory has a number of important implications.

Laughlin⁽⁵⁰⁾ argues that critical theory is important to accounting because it recognises the primacy of the social relationships beyond that of merely the technical. The technical emphasis being that which has led to the preoccupation with the positivist approach. In particular Laughlin argued for the reorientation of accounting research and, at a wider level, for the paradigm of accounting to take greater cognisance of its underlying cultural elements and to blend these into the research and research methodology pursued in accounting. Laughlin⁽⁵¹⁾, Chua⁽⁵²⁾ and Arrington and Francis⁽⁵³⁾ separately argue that the impact on society of accounting is not neutral in the positivist sense, but that the language system of accounting is such that it has an effect upon society. Thus at a more general level, another aim of the use of critical theory is the emancipation of the public from their entrapment by accountants in the capitalist paradigm and the values and ideologies that are associated with it.⁽⁵⁴⁾

Hopper and Powell⁽⁵⁵⁾ see the role of critical theory and alternative and radical approaches as raising the accounting researcher's awareness of social concerns and changing the weighting of criteria for judging the value of accounting theories. They emphasise that this liberation of method and emancipation by the non-accountant to the accounting values and aims, will make accounting less of a lackey to the language of capitalism and more of a benefit to society at large.

Critical theory requires that claims to knowledge, and in particular accounting knowledge, should be judged by the criteria of critical theory. This requires that such issues as the aims and objectives of the researcher, the assumptions, and the social meanings used by the researcher, should be fully explored. By stating and debating the intentions of the researcher and of the research, all parties should be able to respond in a more enlightened fashion. Critical accounting research could then move out of academia and into the domain of the public good. If these critical theory requirements are met then such research will, in a perverse sense, better meet the objectives of the positivists for neutral accounting information and research, since the power relationships will be better understood.

The most important element of critical theory for research and science in accounting is nevertheless that it provides the justification for non-scientific methodologies and in particular, for new and radical methodologies. In an area such as accounting, the non-quantitative is almost of overriding importance now that the quantitative has been so well addressed. A critical theorist will potentially liberate the accounting researcher from the intellectual shackles of positivism, relegating the latter to being just one method amongst many, such that positive theories

will be judged by the standards of positivism and other theories will be judged by their own standards.

Christenson⁽⁵⁶⁾ and May and Sellers⁽⁵⁷⁾ have argued that the use of critical analysis would help to reduce the use of inappropriate proxies when researching social issues and would increase the importance of the qualitative in research. Dillard's⁽⁵⁸⁾ analysis of traditional accounting assumptions addresses these issues and provides a good example of critical analysis.

Dillard's Critical Analysis of Traditional Accounting Assumptions

Dillard applies a critical analysis to the work of Mattessich.⁽⁵⁹⁾ This is particularly relevant to this thesis since Mattessich attempts to define, in an axiomatic fashion, the technological function of accounting. To a large extent his work encapsulates the currently general view of accounting as a technical, business information system and an objective and neutral organ of society. Mattessich focuses on a 'better' technology to enable the accounting product to be more efficient.

Mattessich's first assumption of monetary value is pointed out by Dillard to be reductionist in that it restricts the analysis of social interaction to the representation of money terms. This reification also dehumanises the human element upon which the accounting system is based. Upon this is then imposed a series of time intervals which are obviously distortionary as they take a continuous system and chop it into arbitrary periods.⁽⁶⁰⁾ Dillard points out that Mattessich treats economic and financial objects as if they had value and as if they are real. Thus the analysis privileges the monetary abstraction over the human basis. Social factors are considered secondary since the economic is the primary focus; humans are seen only as

economic beings and typically only in groupings and classifications while the economic 'reality' is seen as an objective item. Beyond this Mattessich determines a number of particular assumptions and rules to allow the accounting model to be practised. Such issues as materiality, valuation and realisation concepts, as well as allocation issues are dealt with. The *prima facie* assumption of the model is the economic reality of the marketplace. What happens then is an analysis built upon these assumptions that becomes increasingly technical, in an axiomatic sense, and abstracts itself further and further from the social basis.

The issues that Mattessich is attempting to define, quantify and establish interactions and relationships for, are the everyday language and concepts of the accountant. His approach is analogous to, if not part of, the scientific view of knowledge whereby relationships may be defined, objects specified and knowledge derived via the use of quantitative factors. Of this Dillard⁽⁶¹⁾ says,

"... I believe it to be pragmatically impossible to legitimately view accounting, that is the discipline and practice thereof, as anything other than a technical artifact of the dominant system. Thus, it would appear difficult for accounting, as observed in the functionist/capitalist reflector, to be critical of itself or the dominant system, and much more difficult for it to take a proactive role in systematic transformation."

Thus although Dillard exposes the key assumptions (ideologies) of accounting for criticism, he is not so arrogant as to dismiss the problems of self analysis (analysis of accounting by accountants) and recognises the difficulty for practitioners to step outside of their world and to look critically at it.

Critical Research in Accounting

However, critical theory will not provide a panacea for all problems associated with the undertaking of research in accounting, the problems of positivism, theory building or the growth of knowledge in accounting, due to a number of factors. One factor is the critical theorist's view of the free thinking individual and the view that individuals seek emancipation. This view is an excessive simplification as individuals are a product of education, socialisation and even of physiological factors of the environment in which they live.⁽⁶²⁾ Therefore it is naive to presume that an individual is a self-driven person. If one takes a social perspective one must presume and assume that an individual is largely a product of their history and background. Thus the cognitive element of an individual (and the ability for free choice) must be severely constrained by the value systems and cultural parameters of their existence. The critical implication that the unenlightened will strive for enlightenment and emancipation is a normative, a *a priori* assumption which at best is a generalisation, and at worst is a naive view of utopia. Other issues - such as how the unenlightened might strive for enlightenment; the relationship between the researcher (the enlightened) and the researched (the unenlightened); the potential power relationship between these groups; the likelihood that the researcher will use the relationship for his/her own power aggrandizement - are all real problems to be addressed in adopting a critical perspective.

Another serious problem facing the use of critical theory in the accounting discipline is the cost, both in money and time, incurred in undertaking research guided by the tenets of critical theory. Substantial time is needed by the reader to understand and empathise with the research and, in an environment where output is all, the positivist approach will frequently be the most cost effective means

of producing research, notwithstanding the ultimate value of the output. Laughlin⁽⁶³⁾ is particularly concerned with this problem.

Conclusion

There are clearly substantial shortcomings in the use of the scientific approach in accounting. These shortcomings are widely debated but in practice little regard appears to be given to them. The justification for this assessment derives from the substantial privilege that is accorded empirical (positivist) research in the literature and the relative dearth of case study and critical work. While there is a discernible move towards the acceptance of the more humanitarian and socially based approach of critical theory, this is only noticeable within a minority group.⁹

The strength of critical theory is its thorough epistemological standards that are imposed upon the researcher as compared with positivism. Critical theory demands that theory be judged by its own internal standards, thus restoring the position of the judge as the authority and not the methodology as the validation of the theory. The subject becomes the judge, rather than some methodological standard that is typically not discussed and, almost invariably, not understood. By arguing that critical theory provides an alternative device or way forward, avoiding many of the problems of positivism and the revolutionary conventionalist approach of Popper, means that the accounting researcher has a powerful new tool. Although much of the language is new, critical theory is however not a new tool *per se*. I would argue that the researcher who followed the scientific approach is by

9. Only three journals can be cited that clearly accommodate a substantial critical/radical approach to research in accounting.

nature sceptical, questioning and reticent to come forward with new ideas until those ideas have been subjected to substantial testing and discussion with colleagues. It is unfortunate that, in accounting, techniques and approaches such as the scientific have been borrowed on belief with little cognisance of assumptions, shortcomings, nor methodology. The scientific approach has been applied in accounting often via the use of statistical tools which have benefited humankind in the physical sciences; whether these tools can be applied within the social sciences with the same degree of certainty is doubtful. Certainly the appropriateness and meaning of surrogates/proxies used in accounting and social science research are frequently inadequately discussed. Yet these proxies are taken to be statements of meaning concerning the observed that can be treated in a statistical and mathematical sense. The adoption of the critical approach should result, in particular, in these social proxies being much more rigorously considered and debated before they are subjected to quantitative analysis.

The critical theorist does not abandon the use of empiricism, and particularly the scientific approach, but merely requires that the approach be adjudged on its own methodological strictures and on the researcher's own aims and objectives. Thus the critical approach is quite amenable to the continued use of positivism, albeit subjected to much closer scrutiny. The critical approach would, however, frequently adjudge positivism to be inappropriate because of the social nature of the observed (subjects). As has been seen from the ontology of Morgan and Smircich⁽⁶⁴⁾ and Covalleski and Dirsmith⁽⁶⁵⁾ substantial elements of the accounting universe is comprised of social factors which do not lend themselves to empirical analysis.

Finally, the critical approach does not provide an alternative method of research but an alternative method of evaluating and validating research. Critical theory is clearly of the weltanschauung, bridging to the postmodern. Whether critical theory may be classified as postmodern or leading to it, is a debate for a different venue. However, by emphasising social, contextual and humanitarian issues and de-emphasising the scientific, critical theory lays the groundwork for the full move to the postmodern and pluralistic view of the growth of knowledge.

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CHAPTER EIGHT

THE POSTMODERN AND THE DEVELOPMENT OF KNOWLEDGE

Introduction

The notion that the development of knowledge takes place within a social context, rather than within some objective abstraction has already been evidenced as gaining increasing acceptance.¹ Within accounting, the work of Kuhn has been widely discussed and sociological and phenomenological research has become more acceptable, and critical as well as postmodern approaches are being entertained although still considered innovative in accounting.²

I have thus far traced the development of understanding in accounting from the application of traditional scientific approaches (as typified by methods used in the natural sciences) to the interpretivist position, particularly that of Gadamer (and so downplaying the structuralist hermeneutics of Schutz), and from there to critical accounting based largely around the work and views of Habermas. In the views of both Gadamer and Habermas we see an uneasy relationship between the acceptance of the traditional scientific approaches and the arguments for a more interpretive and relativistic position. This relationship is not easily dealt with although classifications provided by writers such as Chua⁽¹⁾ force a demarcation (a struc-

1. Even Popper referred to the need for peer acceptance of new theories rather than acceptance being based solely on specific criteria. (Waldron, J. Making Sense of Critical Dualism. In Currie, G. and Musgrave, A. (ed) *Popper and the Human Sciences*. Martinus Nijhoff, Dordrecht, 1986, p. 105-119.)

2. Within accounting, publications such as Accounting, Organisations and Society, Journal of Accounting, Auditing, and Accountability and Critical Perspectives on Accounting point to the growing acceptance of a more social perspective.

tural analysis?) upon thought such that the traditional views of accounting, the interpretive and the critical approaches are seen as distinct. I consider that this view essentially reflects Chua's own structuralist background and her need to impose order and system upon a social and dynamic environment. Chua appears to ignore the detailed argument by writers such as Popper⁽²⁾ and Ayer⁽³⁾ concerning facts and value and the gap between the two. As Popper⁽⁴⁾ states,

"...Facts as such have no meaning; they can gain it only through our decisions. ... we bear the ultimate responsibility even for the standards we choose."

Furthermore, persons such as Einstein and Bohr saw the gaining of knowledge as often being 'unscientific' and somewhat existential. Is the scientific approach possibly more important to the commentators/historians seeking a classification system for others' actions, than to the theorists seeking further understanding?

This chapter attempts to bridge the apparent gap between competing approaches to the gathering of knowledge, via a recourse to advocating no single approach and by so doing finessing the question of which approach is privileged via a change in the rules! The view that knowledge can progress and that legitimate research may take place without prescription is expounded by pluralists, who may be classified as being part of postmodern thought.

Thus this chapter focuses on the postmodern and, in particular, pluralistic views of gaining knowledge. It considers the works of Feyerabend since his views have received such widespread circulation, and the work of Foucault and Lyotard. The objective of this chapter is to put before the researcher a different perspective on scientific approaches and in particular, a different perspective

on the place of scientific approaches in society and in the knowledge gathering process.

The Postmodern

The postmodern view is initially aimed at unseating the place of privilege of the scientific (modern) view. Later the postmodern became a view in itself, being driven particularly by the pluralistic views of people such as Lyotard and Feyerabend. It is interesting that a number of writers may be seen to be critics of structuralism in their early work while in their latter writings developing a genuine postmodern critique. Such a progression can be seen by following Feyerabend's earlier work *Against Method* through to his latter work *Science in a Free Society*. Also the work of Foucault provides a similar progression from *The Order of Things* through to the later works of *The Archaeology of Knowledge* and *Discipline and Punish*. However postmodernism is not a critique but a pluralistic movement that has spread over philosophical, social and cultural activities in the last quarter century. Numerous objectives are given for it, early ones being to de-privilege the established narratives of rationality, science and structure and the consequent structures that these provide for western society, and more recently, to provide a genuine alternative via Dadaist and pluralistic approaches. Yet the question must be raised as to whether this alternative is an alternative at all.

Madison⁽⁵⁾ uses the outline of his book as a metaphor for the postmodern when he says,

"Being without a fixed beginning, middle and end, this book is not only about postmodernism, it is also postmodern; it is devoid of metaphysical closure.

This is not to say that it is devoid of meaning, or that its meaning is undecidable. Unlike a lot of postmodernist narratives, it most definitely does have

a story to tell - and there is a plot to it. This, though, is a plot without a denouement, since the story does not have an end, being, as it is, the story of our times, whose outcome or sens (meaning/direction) is as yet undecided. The story is one which is increasingly encountered in a number of different versions, depending on who it is who is doing the telling. It is the story of postmodernism, which is to say, of the end of modernism - even more, of the end of metaphysics (the "metaphysics of presence"), the end (according to some) of philosophy itself."

This metaphor of the postmodern is equally applicable to this chapter and the conclusions to this thesis, since to deal with the postmodern is to deal with everything that is noble and important to humankind and, at the same time, to deal with nothing - it is as to paint great vistas but also to leave the canvas blank. As Donoghue⁽⁶⁾ says,

"Every student of modern culture is evidently required to state a position on modernism and postmodernism, even though it is not clear what these words denote. They mean, it appears, whatever we want them to mean."

Outhwaite⁽⁷⁾ raises a word of warning concerning the abandonment of empiricism when he says,

"... the abandonment of the simple certainties of empiricism leaves the philosophy of science on a slippery slope towards a position where all claims to truth have apparently to be abandoned and where the choice between alternative theories appears to be a matter of taste or an arbitrary leap of faith."

I do not hold to this view and will, through this chapter and the thesis conclusions, argue for a higher order

anarchy, what I have called pluralism.³

Foucault on Power, History and Science

Merquior⁽⁸⁾ describes Foucault as a neo-anarchist. Guedez⁽⁹⁾ sees Foucault as an anti-positivist and an anti-structuralist. Foucault⁽¹⁰⁾ certainly claimed that he was not a structuralist when he says he uses,

"none of the methods, concepts or key terms that characterise structural analysis .."

He has provided a form of analysis which could perhaps be considered post- or neo-structuralist. Furthermore, Foucault has taken the concept of power in the context of a struggle, not to achieve a brave new world but to de-privilege those who have power purely for the sake of up-ending them, since the powerful are no more legitimate than the people and the views dominated by them.

Foucault has been described as an historian of the present, a person who reaches back into history to describe both the past and the present. By dealing with modern history he has brought together the thinkings of both history and philosophy in a way that has helped specify the *"historical conditions"* that lie behind the development of western culture and he has provided a critique of the current. Merquior⁽¹¹⁾ notes that Foucault also provided an alternative view to the scientific,

"While historians of science in France were interested essentially in the problem of how a scientific object is constituted, the question I asked myself was this: how is it that the human subject took itself as the object of possible knowledge? Through what forms

3. Refer also to Feyerabend, P.K. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London, 1975, p. 21, footnote 12.

of rationality and historical conditions? And finally at what price? This is my question: at what price can subjects speak the truth about themselves?"

For Foucault, one of the primary objectives is to liberate knowledge from the idea of the subject, to free it from the primacy or privilege given to the human observer.⁴ Foucault⁽¹²⁾ states,

"My aim was to analyse history in the discontinuity that no teleology would reduce in advance; ... to allow it to be deployed in an anonymity on which no transcendental constitution would impose the form of the subject; to open it up to a temporality that would not promise the return of any dawn. My aim was to cleanse it of all transcendental narcissism."

He also sees that the social interchange may lead to alternative considerations of knowledge and understanding⁽¹³⁾. The critical separation between the structuralist world and the Foucauldian world of analysis is the concentration on reason - in particular Foucauldian analysis seeks to overthrow the idea of the human subject being the centre of knowledge via an objective analysis and the view that reason *per se* was knowledge. Foucault argues that no one form of reason is knowledge so accepting a pluralist (postmodern) approach. Thus one of his principal objectives is to go to the heart of the basis of social science thought and subject it to scrutiny and intellectual harassment.

Perhaps Foucault's major contribution is the method of analysis that he brought to history whereby rather than

4. This freedom from domination is at a different level to the mere freedom from the domination of the scientific approach.

seeing historical developments as a series of events around which certain linkages may be made by historians, Foucault sees history as a history of ideas within which there is continuous change and the seamless melding of one domination of patterns into another. Sheridan⁽¹⁴⁾ describes this general history as speaking of,

"... 'series, segmentations, limits, difference of level, time-lags, anachronistic survivals, possible types of relation'. It is not simply a juxtaposition of different histories or series - economic, political, cultural, etc. - nor the search for analogies or coincidences between them. The task proposed by general history is to determine what forms of relation may legitimately be made between them."

Foucault exposed the apparent continuum of ideas, developments and incremental change as false demonstrating that the history of knowledge was in fact a series of gaps, disruptive changes, radical departures, etc whereby a number of quite radical and alternative statements or conditions will lie within a system at the same time. Foucault referred to this as discursive formation. These ideas are seen in the notion of oeuvre, which might be likened to a collection of texts or items appearing within a single heading.

The key element in Foucauldian analysis is that the discussion constitutes the object. This contrasts with the positivist or structuralist position which frequently vivifies the object of the discussion, such as the economy. Sheridan⁽¹⁵⁾ goes to the heart of the analysis when he says,

"The history of ideas usually attributes a certain coherence to the discourse it analyses. If this coherence is not apparent at a manifest level, it finds a hidden unity at a deeper level: in the internal organisation of a text, the

form of development of an oeuvre, the collective spirit of a period, type of society or civilisation..... For archaeological analysis, however, contradictions are neither appearances to be overcome, nor secret principles to be uncovered. They are objects to be described for themselves.

Archaeological analysis involves comparison: comparison of one discursive practice with another and a discursive practice with the non-discursive practices (institutions, political events, economic and social processes) that surround it. ...an example of the first type of comparison compares the states of several discursive formations at a particular period, but not with a view to reconstructing on this basis a complete picture of, say, Classical science or the 'Classical spirit'. The intention is not to show that eighteenth-century man was more interested in order than history, in classification than development, in signs than in causality. The aim is to reveal a number of specific relations existing between a limited set of discursive formations."

Thus the key aim of the archaeology is the analysis of differences.⁽¹⁶⁾ It therefore does not try to gloss over differences, chasms, unexplainable or unexplained events or gaps. It accepts what it finds, gives weight to it, describes and analyses it. What is particularly strong about this form of analysis is that it is a social analysis that avoids the entire science/ non-science distinction. As Sheridan⁽¹⁷⁾ states,

"Its criterion is not that of scientificity or truth: it makes distinctions, not of value but of function, between 'scientific' and 'non-scientific' disciplines. Discursive practices give rise to 'knowledge', whether or not they aspire to or achieve scientific status. The territory of archaeology extends to literary or philosophical texts as well as scientific ones. Non-scientific knowledge is not to be judged by the criteria of science: it is not to be

relegated to an erroneous, deceptive, interested domain such as that defined by the Althusserian concept of 'ideology'. On the contrary, the sciences are thoroughly imbued with ideology. A science does not diminish its relations with ideology by rectifying its errors."

Foucault's argument for pluralism and the gaining of understanding unfettered by scientificity or ideology parallels much of Feyerabend's writing. Both appreciate 'knowledge' whether or not its derivation is ideologically privileged or not.

Pluralism⁵

Pluralists hold that the emphasis on the development of particular methodologies of scientific research, or particular epistemologies, that should (or should not) be used was detrimental to the understanding of humankind's environment. They argue that these methodological prescriptions constrain the research approach at the methodological and method levels, but also constrain the entire perspective researchers have as to the nature of reality. These "infallible rules"⁽¹⁸⁾ are prescriptive and hence restrictive.

Any approach that steadfastly follows rules and procedures, which may owe as much to convention and fiat as to logic, does not correspond with the historical development of science according to Feyerabend⁽¹⁹⁾,

"Science as we actually find it in history is a combination of such rules and of error."

and when he says⁽²⁰⁾,

5. A key contributor in this area is Feyerabend, in his works *Against Method: Outline of an Anarchistic Theory of Knowledge*, New Left Books, London, 1975, and *Science in a Free Society*, New Left Books, Manchester, 1978.

"The idea of a method that contains firm, unchanging, and absolutely binding principles for conducting the business of science meets considerable difficulty when confronted with the results of historical research."

Feyerabend's analysis of historic development leads him to propose that all methods espoused or recommended at some time in the past have also, at some time in the past, been demonstrated not to hold or to be inappropriate. He states⁽²¹⁾,

"We find then, that there is not a single rule, however plausible, and however firmly grounded in epistemology, that is not violated at some time or other. It becomes evident that such violations are not accidental events, they are not results of insufficient knowledge or of inattention which might have been avoided. On the contrary, we see that they are necessary for progress. Indeed one of the most striking features of recent discussions in the history and philosophy of science is the realisation that events and developments, ... occurred only because some thinkers either decided not to be bound by certain 'obvious' methodological rules, or because they unwittingly broke them.

This liberal practice, I repeat, is not just a fact of the history of science. It is both reasonable and absolutely necessary for the growth of knowledge."

In this regard Feyerabend shares similar views to Kuhn and others, in maintaining that the development of knowledge when considered historically does not follow any particular rule or set of rules. Yet it is rules and methodological prescriptions that accounting theory writers have

widely advocated.^{6,7}

Feyerabend⁽²²⁾ argues that history is always much more detailed, more full of accident, juxtaposition and complexity as well as unpredictability and apparent non-rationality, than historians and others would care to explain. For instance, Einstein⁽²³⁾ wrote,

"The external conditions which are set for (the scientist) by the facts of experience do not permit him to let himself be too much restricted, in the construction of his conceptual world, by the adherence to an epistemological system. He therefore, must appear to the systematic epistemologist as a type of unscrupulous opportunist"

Feyerabend⁽²⁴⁾ goes on to say,

"A complex medium containing surprising and unforeseen developments demands complex procedures and defies analysis on the basis of rules which have been set up in advance and without regard to the ever-changing conditions of history."

Feyerabend argues that the non-following of particular rules is not a sign of indiscretion on the part of the researcher. On the contrary it reflects an awareness of insight into a problem, enabling some form of psychic or cognitive jump (Kuhn⁽²⁵⁾ would use the term gestalt

6. Watts and Zimmerman (from the 1980's through to the present) have advocated a particular approach so vehemently that they leave little room for alternative methodologies. (Watts, R.L. and Zimmerman, J.L. *Positive Accounting Theory*. Prentice Hall, Englewood Cliffs, New Jersey, 1986.)

7. A counter position is held by Laughlin who advocates a pluralistic approach and cites Feyerabend. (Laughlin, R.C. On the Nature of Accounting Methodology. *Journal of Finance and Accounting* v. 8(3), 1981, p. 329-351)

switch) to occur which better explains the particular relationships or quandary at hand.

Feyerabend⁽²⁶⁾ maintains that,

".. nobody can say in abstract terms, without paying attention to idiosyncrasies of person and circumstances, what precisely it was that led to progress in the past, and nobody can say what moves will succeed in the future."

With these considerations what guidelines or recommendations can be followed by the researcher?

Pluralism and Research

Feyerabend's contention that *anything goes* can be interpreted to mean that if any method(s) is legitimate, then it should be maintained. Conversely, it can be interpreted to mean that any, and every, available method can be used. Initially the notion of *anything goes* lacks guidelines except in the negative - under this scheme, one cannot say a method should not be used and it can also be interpreted as *everything stays*. *Anything goes* thus opens up the gamut of research methodologies (and methods) for the researcher, based on whatever precepts s/he chooses. Thus Feyerabend⁽²⁷⁾ argues that a researcher must be free to pursue ideas in whatever way s/he chooses, stating

"... a person trying to solve a problem whether in science or elsewhere must be given complete freedom and cannot be restricted by any demands, norms, however plausible they may seem ..."

The method appropriate for particular circumstances will depend on the circumstances themselves and must be justified by the circumstances of the research.⁽²⁸⁾ Therefore the criterion of circumstance dictates methodology and method. Circumstance should not be seen as merely the pragmatics of the particular problem at hand, but also the

cause and purpose of the researcher.

For example, the area of stock market evaluation and prediction has traditionally been subject to strongly mechanistic and statistical analyses. Simply because the area lends itself to statistical and mathematical treatment, should not be the justification for continuing with these methods. If there is a method(s) that meets the researcher's needs, in this case it might be a better model of prediction, then those alternative methodologies should be pursued. Thus the desired end - a better model of prediction - and not the material - readily quantifiable stock market database - should determine methodology. If the strength of predictive capability is better than that achieved via traditional approaches then the new method should be used.⁸

The approach of the pluralist allows for conflicting methodologies, that may be drawn from various areas of research methodology, including those that some may consider to have historical interest only, such as naive induction or logical positivism. Some circumstances may dictate an innovative approach going beyond what is considered common research methodology. The overriding factor is the desirability of a particular outcome or state to an individual or collective of individuals (perhaps accountants).

Thus the paramount principle of pluralism is that no one method can be privileged over another. This pluralist position is in some ways frightening since it opens up the debate to calls of emotion and a general lack of any

8. In particular, refer to research on the efficient market in Fama, E.F. Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance* May 1970, p. 383-417.

substantive 'knowledge'. But this is not really the position. Pluralism is against ideology and particularly is against privilege of any kind, except the right to believe in what you wish. This of course leads to the question, what is knowledge? - from the pluralist position, knowledge is what the group believes it to be. This jump from the positive, structuralist view of an absolute truth is the jump to the postmodern. This creates certain problems for the more traditional research regimes in which definite views are held on the legitimacy of different research methodologies and methods. The pluralist argues that traditional methodologies are not mutually exclusive and that they should be used where appropriate given the particular problem statement.⁽²⁹⁾ The corollary is that the researcher must make a judgement on the choice of methodology. Considerable effort will be spent in the discussion and justification of methodology and relatively less in the actual undertaking. The element of discretion thus required by the researcher will result in levels of dissonance and an essential reaction against the imposed discretion. This lack of surety (which some may perceive to be a loss of security) is likely to result in an antagonism towards the new order. Feyerabend⁽³⁰⁾ states,

"Fear of moral and political chaos increases the aversion by adding practical disadvantages to the intellectual drawbacks."

Thus pluralism requires much more thought by the researcher concerning methodology (and also method) than in traditional, scientific-oriented approaches. For example, finance researchers could claim justification for the use of a positive approach and, largely due to the apparent acceptance of that approach, move immediately to method and analysis with little expectation of subsequent methodological criticism. This cultural support for acceptable methodology (refer disciplinary matrix) obviates the need

for methodological discrimination by the researcher. However, as I shall demonstrate later, an acceptance of pluralism demands an enunciation and justification of methodology in all cases of research. Consequently, research undertaken within a pluralistic framework is wide open to methodological criticism.⁹

Although the pluralistic approach deals mostly in generalities, Feyerabend offered some support for those attempting to better understand the universe. These approaches should not be seen as discrete but as elements of an overall perspective, they could exist in parallel and frequently be interactive.

Counterinduction is recommended to overcome the limiting function of induction and to widen the approach to theory generation. The use of counterinduction (hypotheses or positions that run against existing or confirmed theories/facts) runs against the promulgation and development of stability and sterility. Feyerabend⁽³¹⁾ says,

".... the long lasting success of our categories and the omnipresence of a certain point of view is not a sign of excellence or an indication that the truth or part of the truth has at last been found. It is rather the indication of failure of reason to find suitable alternatives which might be used to transcend an accidental intermediate stage of our knowledge".

Work in an area which continues to pursue inductively established paths and procedures is seen as stagnation. To

9. I acknowledge that areas of similar work will tend to be dominated by a particular methodology at a particular time. However alternative approaches will have to be considered and may often run in parallel to and conflict with the more widely used methodology, thus creating conflict and tension.

avoid this Feyerabend⁽³²⁾ describes the use of counterinduction as,

".. introducing, elaborating and propagating hypotheses which are inconsistent either with well-established theories or with well-established facts."

The approach has shades of Marxian dialectics in the establishment of conflict whether between substructure and superstructure or between thesis and antithesis. It is argued that by establishing this dialectic relationship - this permanent state of necessary argument, juxtaposition, justification and discussion - whereby views outside the normal range of the established paradigm are still entertained and discussed, researchers will stumble on and solve problems.

A counterinductive approach or the placing of alternative theses alongside established lore is likely to lead to many theories and hence an adoption of a pluralistic approach.⁽³³⁾ This pluralistic approach¹⁰ recommended by Feyerabend follows directly from counterinduction in that by working on radically different constructs within a discipline area, one can have a better chance of stumbling upon another nugget of understanding. Furthermore, he argues that pluralism is an⁽³⁴⁾,

"essential feature of all knowledge that claims to be objective"

and not, as Kuhn argues, an intermediate stage before

10. Refer also to John Stuart Mill's essay "On Liberty" in Cohen, M. (ed) *The Philosophy of John Stuart Mill*. New York, 1961, p. 258. Mill argued for plurality on four grounds: firstly as a rejected view may be found to be true; secondly a view may contain part of the truth; thirdly, even a true statement needs to be seen in a dialectic relationship to avoid a slide into prejudice; and fourthly, contrast is needed to give meaning and understanding.

normal or new normal science.

Feyerabend argues for the use of ad hoc hypotheses. He points to historical events where advances in understanding and knowledge would not have eventuated without the use of *ad hoc* hypothesis.⁽³⁵⁾

However, established traditional research methodology and method does not allow for the use of *ad hoc* hypotheses⁽³⁶⁾ since these are considered to be a defensive response to protect a methodology. Feyerabend's view maintains that a person may have some intuition or insight to pursue some direction even though the facts and logic of the situation demonstrate that their hypothesis does not hold. They continue working in the area until (apparently 'all of a sudden') a new level of understanding is attained. This transcends the traditional, mechanistic approach of the gaining of knowledge. Under these traditional approaches such as advocated by Lakatos and Popper, if the subsidiary contentions of the hypothesis are broached then the basic underlying tenets of the theory must be reconsidered. For these writers the establishment of *ad hoc* hypotheses or strategic blocking is not acceptable.¹¹

The final recommendation of Feyerabend is the acceptance of incommensurable theories within a discipline or area of study. This is analogous to the Kuhnian proposition of a crisis stage in which alternative disciplinary matrices exist, but a situation totally unacceptable from a traditional scientific method point of view. Feyerabend contends that theories fundamentally at variance may exist

11. It should be noted that Lakatos does accept the need for *ad hoc* hypotheses when developing new theories (refer to Feyerabend, P.K. *Against Method: Outline of an Anarchistic Theory of Knowledge*. New Left Books, London, 1975, p. 94).

within a discipline and be pursued by members of the discipline. Because of this diversity, an interchange of ideas and interaction between members of the discipline takes place allowing for a much more critical consideration of ideas.⁽³⁷⁾ This contrasts with the gestalt switch or near religious conversion in the Kuhnian model when members of a scientific community switch disciplinary matrices. Several examples are cited within the area of physics, between Galileo and Copernicus and in particular between Einstein and Newton.⁽³⁸⁾ Even within the area of accounting one has only to remember the strength of debate surrounding the discussion of continuously contemporary accounting and that of the traditional historic cost model to understand how polarised and how great the chasm appears to be between participants favouring what are perceived to be radically alternative structures.

Traditional scientific approaches hold that incommensurate theories can not exist side by side since the nature of a theory is that it must provide a better explanation than another.¹² Feyerabend (and the pluralist view in general) allows for these parallel and, at times, divisive theories to continue, and argues that it is an essential part of the growth of knowledge for them to exist side by side in a state of dialectics and consequent refinement.

Criticisms of Feyerabend

The writings of Feyerabend have not been widely accepted by those working in the philosophy of science area. His views have been the subject of severe criticism and disapproval. Many outside the disciplinary matrix of the phi-

12. Popper holds that a theory may stand only if it advances the explanation beyond the earlier theory as well as answering other unanswered questions. Once a theory is accepted then earlier theories are completely displaced.

philosophy of science itself¹³ have found much merit in the principles he advocated, despite the many criticisms.

A principal criticism of the pluralistic view is that of pluralism itself. Pluralism implies lack of method - the choice between any existing method, any new method or no method at all is scant guidance for researchers. Persons working in an area have different levels of knowledge and understanding. The senior members of a discipline will understand what is already explained by theory, where the boundaries of knowledge and understanding are in the discipline, and which questions are still unanswered. These persons, if one could loosen the mental strictures which their very learning and seniority within the discipline have imposed, could gain significantly from adopting a pluralistic view. However, those new entrants to a discipline with little socialisation into particular method or methodologies will have a limited appreciation of what is known and not known. To encourage a pluralistic approach within this group would likely lead to a rediscovery of the wheel for the *n*th time. The new entrants may be more amenable to a pluralistic approach but there would be little benefit to understanding, yet to introduce pluralism to the initiated and established group members is likely to be rejected because of its threatening nature.

Thus there lies a fundamental juxtaposition between those with knowledge who have seniority, power, and influence and are therefore protective of their positions, with those who could more readily take on a radical approach but who lack the knowledge and worldliness to do so effec-

13. One might argue that this disciplinary matrix of the philosophy of science imposes such strenuous training and socialisation on its members that they become alienated from other viewpoints.

tively.

This dilemma lies across all disciplines. For example, people enter a university and through the teaching process, particular approaches are inculcated. These approaches or rules are those which the leaders of a scientific community (university) have already accepted. The survivors of the university process are those who successfully socialise themselves within the particular 'school'. As Feyerabend⁽³⁹⁾ states,

"There is no attempt to waken the critical abilities of the pupil so that he may be able to see things in perspective. At the universities the situation is even worse for indoctrination is here carried out in a much more systematic manner."

Such also is the case in accounting - the new entrants to the discipline will have moved through university (or at least tertiary education), followed by a period of practice such that they are so moulded into the system of the discipline that the prospect of pluralism is anathema. Feyerabend⁽⁴⁰⁾ comments on his own role as a professor, stating,

"I told them (students) stories and I tried to strengthen their natural contrariness, for this, I thought, would be the best defence against the ideological street singers they were about to meet; the best education consists of immunising people against systematic attempts at education".

A second problem arises in recommending methodologies to persons working in an area. To recommend pluralism is to give no recommendation with respect to methodology or method but to propose a metatheoretic or philosophical perspective and then leave the researcher to him/herself. This is hardly the way to guide novices in an area.

Another difficulty arises in the passing on of knowledge within a pluralistic approach.⁽⁴¹⁾ The passing on of knowledge in the Western tradition generally entails the acceptance of procedures and rules (disciplinary matrices in the Kuhnian model). However, pluralism rejects set procedures and guidelines. Thus there is little basis for the new entrant or researcher to progress and develop in an area when faced with a plethora of contradictory and often non-articulating arguments and methodologies. The only way to progress is to mentally hold numerous alternative and disparate themes at the same time. This capability demands intellectual stamina founded on a view of knowledge that is radically different to the traditional incremental, staged learning that schooling and training normally follows.

A fourth area of criticism is the evidence put forward by Feyerabend and particularly the examples he uses. Frequently his examples are drawn from the natural sciences where the problems of methodology are better evidenced than in the social sciences. The methodology of research within social science may be little different to that within the natural sciences, yet the nature of the subject matter is substantially different. On one hand one is dealing with organisms with short and volatile life-cycles interacting in immediate and dynamic systems, whether they be rats, ants, humans or whales, and on the other hand the matter is of immeasurably greater time span and durability - subjects like the nature of the universe, of matter, time itself, physical properties and the development of galaxies and solar systems. This latter category tends, due to the perspective of humankind, to have ascribed to them such attributes as 'laws' and 'fundamental principles' whereas the former, due to its incredibly dynamic and vivacious nature, is intrinsically more difficult to observe, measure and understand. However, Feyerabend⁽⁴²⁾

does cite a number of social science examples in his latter works.¹⁴

A further difficulty in using a pluralistic approach concerns the mood of necessary performance that is increasingly prevalent. Performance expectations are increasingly linked to measurable output that meets certain criteria with the benefit being translatable into monetary terms. This obsession with the material tends to emphasise work that generates rapid results and which has a market. Lyotard⁽⁴³⁾ states,

"The relationship of the suppliers and users of knowledge to the knowledge they supply and use is now tending, and will increasingly tend, to assume the form already taken by the relationship of commodity producers and consumers to the commodities they produce and consume - that is, the form of value. Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production: in both cases, the goal is exchange."

Yet these criticisms largely reflect the reason that a pluralistic approach was first advocated. Alternative and radical proposals were necessary to break the scientific methodological straitjacket that many writers described as appropriate research methodology. Thus pluralism would allow alternative methodologies as well as enabling the downgrading of the preeminence of scientific methodology,

14. It is interesting perhaps to ponder the distinction between the natural sciences and the social sciences. The distinction is often considered clear cut due to the nature of the components as discussed above. However given a longer time span and broader view of life it may well come to pass that the universe will be seen as a living and purposeful entity, merely one much more vast both physically and temporally than humankind, and one in which the entire span of humankind will be recorded as a footnote in galactic history.

so releasing many researchers from the strictures of arbitrary methodological criteria. It is these criteria as the basis for the development of knowledge that Feyerabend argued against.

Pluralism and the Cultural Setting of Research

Most philosophers concerned with the development of knowledge and the philosophy of science attribute something special to the nature of science itself. Kuhn, even while proposing a revolutionary view of the progress of knowledge, argues that science epitomises rationality. Popper considers that the foremost example of knowledge is scientific knowledge. Feyerabend does not adopt this position. His analysis allows for other alternatives in the gaining of knowledge and, if appropriate, the rejection of the scientific approach.

Feyerabend⁽⁴⁴⁾ considers that the status accorded science (particularly in the western world but increasingly globally) lacks justification and is supported largely by an act of faith. One might liken the enthrallment with science to the hold Christianity gained over society in mid-Roman times and which was maintained via bureaucratic and institutionalised oppression. The argument is as follows:

The method of science has to be followed for research to be considered legitimate. Only that knowledge gathered via the scientific approach is given any weight, thus the method is judged rather than the research itself.

In institutions such as universities, professional associations, and business organisations the belief in science is instilled to such an extent that it garners a level of allegiance similar to the Kuhnian notion of a disciplinary matrix. As a result the researcher seeking acceptance within a scientific community must employ the methods of

science in order that his/her research can be perceived as legitimate. It is this bureaucratisation and institutionalisation that Feyerabend⁽⁴⁵⁾ considers primarily responsible for the high status of science, not the scientific method *per se*. He argues that there is nothing intrinsically unique about the scientific approach and that there is no clear scientific method which yields results in the way that justifies the status of science.

Feyerabend⁽⁴⁶⁾ holds that the individual is the centre of understanding and that it is the freedom of choice of the individual which is essential when considering the development of knowledge. Thus the gaining of knowledge should be separated from the institutional factors to allow the development of alternative practices where appropriate. The institutionalisation of the methods of science and the resources given over to maintaining this approach mean that it becomes a political imperative that the existing method is continued.

Feyerabend continues his argument by maintaining that for any methodology of science it is possible to find substantial developments in knowledge that came about by procedures and methods that ran counter to that methodology. Thus there is no one principle that can bind together research methodology except the principle of anything goes. He says⁽⁴⁷⁾,

"... there is only one principle that can be defended under all circumstances and in all stages of human development. It is the principle: anything goes."

The proliferation of theories that ensues is to be welcomed, since the choice faced by researchers is then one of theory not method. The advocacy of one theory against another forces the critical discussion of underlying assumptions. All too frequently when the observation-to-

theory process is followed, detailed discussion of assumption and process does not take place while the focus is on the way in which the observations were carried out and the particular theory itself.

Feyerabend therefore argues firstly, for a methodological pluralism in that numerous methodologies may be pursued within a disciplinary matrix concurrently and secondly, that a theoretical pluralism may also exist whereby alternative theories may occur within a disciplinary matrix also concurrently. A third form of pluralism is also evident in the writings of Feyerabend, that of ideological pluralism. The view that science is correct must be defended and justified alongside other rival views. These views may include mysticism, magic or religion. Thus the individual must have the choice of ideology.⁽⁴⁸⁾ Rather than undermining the position of science, in the longer term this critical view will make science more highly regarded, more dynamic, and more humanitarian. The prospect of a dramatic and incisive methodology and arena for the development of knowledge is exciting in that it will enliven the area and force greater responsibility upon researchers.

The scientist and researcher attempt to simplify science by restricting the domain of research via education of the participants providing, amongst other things, "*a thorough training in such a logic*".⁽⁴⁹⁾

Researchers generally look for immutable facts and do not consider the role of history or religion in the development of knowledge. However for the worker in a discipline, the language s/he uses is not his/her own, the thoughts s/he has are not his/her own and the culture that becomes evidenced is no longer one's own. Thus the world in which the researcher works ends up dominating the individual.

Without acknowledging this, science and knowledge are perceived as being separate from culture, belief and opinion. Debate comparing methodologies and approaches occurs within a similar or same discipline, thus the methodologies that survive are those espoused by the group and the individuals within it due to the acculturation and socialisation of group views. To pursue a view at odds with the disciplinary matrix for any length of time is almost impossible since the individual will be cut off from the group and ultimately expelled.

The ideal of rationality is pervasive and far-reaching within the philosophy of science and has the effect of reducing individual liberty. Yet in a social science an unrestricted or open perspective and an empathy to those things which one is ignorant of, or only partially understands, is the driving force behind discovery and knowledge.

Historical examples of the progression of understanding and knowledge do not support a restriction to methods of science. Most of the major developments in the natural sciences, Feyerabend argues, have been the result of researchers deciding to not be bound by traditional methodological rules or, by mistake, breaking those rules. Bohr⁽⁵⁰⁾ had a profound view of the place of science and rules in knowledge, in that

"... he would never try to outline any finished picture, but would patiently go through all the phases of the development of a problem, starting from some apparent paradox and gradually leading to its elucidation. In fact, he never regarded achieved results in any other light than as starting points for further exploration. In speculating about the prospects of some line of investigation, he would dismiss the usual consideration of simplicity, elegance or even consistency with the remark that such

*qualities can only be properly judged
after the event: ..."*

Thus people such as Einstein and Bohr, who have been responsible for major breakthroughs in knowledge, freely admit to using non-scientific approaches and moving beyond the limitations of accepted procedure and accepted logic. The insidious nature of our socialisation is seldom realised and in the name of free thought and academic endeavour, research becomes increasingly driven by dogma and prejudice.

The great thinkers can be distinguished from the ordinary person, and hence the reader may wish to call for rules to guide the latter. Rules as guidance are admissible, but when those rules turn into unbending, static, straitjackets, when they become immutably bound in the power structures of professions and society such that the ordinary person is alienated from the fruits of their labour, then those rules and the power structures that support them must be overthrown.

Accounting and Pluralism

The criticisms of the application of the pluralistic approach to the scientific community apply equally to accounting. However, there are further obstacles to the adoption of pluralism in accounting resulting from the nature of the accounting discipline itself. Equally, there exist attributes of the discipline that may be used to support a pluralistic view. The accounting discipline has tended to espouse mechanistic and specific problem-oriented approaches. These problem-oriented, short-term approaches have led to research grants feeding into areas of immediate result such as finance, management accounting, and financial reporting standards research, with little funding being targeted towards philosophical and longer term issues such as responsibility to the community and

green accounting.

The accounting researcher is confronted then with diverse and numerous situations for which methodology and method have to be appropriate and effective. Furthermore, the worker in accounting by dealing with business and commercial structures has to accommodate relationships which are dynamic and perhaps in disequilibrium. The clients of accounting may at times require the 'neutral and objective provision of information for decision making'¹⁵ but may frequently require the provision of data to support political and personal ends in the immediate business environment and may also be seen, in a wider scope, to be supporting the domination of the controllers of capital themselves. Whatever the 'reality' of the accountants' role it probably encompasses all of the above as well as other roles not stated here. The important statement (ontological) is that the role is diverse and dynamic, it is socially based and hence potentially only able to be specified in a specific instance. The domain of an accountant lies within the plethora of micro systems as well as the larger social structures. Although the natural sciences deal with items that are dynamic and are changing, both in a micro and macro sense, it is generally considered that beneath the surface lie constant relationships and perhaps even immutable laws. However the social sciences (which encompass accounting) are typically considered to have no such fundamental or underlying laws. Tricker⁽⁵¹⁾ says,

".... there are no fundamental laws waiting to be discovered; no unchanging eternal verities to be revealed."

The accounting environment encompasses all the political,

15. This objective being essentially the traditional view of the accountants' role.

sociological, psychological factors which make up any social grouping. Thus the accounting researcher has to deal with the specific to the very intangible.

It is partly because of this spectrum of situations that confronts the accounting researcher that a much broader view of research methodology and particularly a pluralistic view is considered essential.

Research in Accounting

Accounting research has tended to occur piecemeal with little coherent recognition of the context and method of discovery in accounting. Tomkins and Grove⁽⁵²⁾ state,

"it is important for accounting researchers to recognise clearly the ontological assumptions underlying their work and, through questioning that, consider alternative approaches needed."

Accounting research has predominantly considered the accounting reality via an inductive view of concrete structure or process, in other words a mirror of the natural sciences. Only embryonic work is being carried out in other areas on the research continuum.¹⁶ One such continuum is suggested by Morgan and Smircich⁽⁵³⁾ which is an ontological progression from concrete structure through projection of human imagination.¹⁷ The last four categories are particularly pertinent to a pluralistic view. These are:

contextual field of information;

16. Also refer to Chua, W.F. Radical Developments in Accounting Thought. *The Accounting Review* v. 61(4), 1986, p. 601-632.

17. This analysis has been extended by Covalleski and Dirsmith. (Covalleski, M.A. and Dirsmith, M.W. Dialectic Tension, Double Reflexivity and the Everyday Accountant Researcher: On Using Qualitative Methods. *Accounting, Organisations and Society* v. 15(6), 1990, p. 543-573.)

symbolic discourse;
social construction; and
projection of human imagination

and, following from earlier arguments concerning the nature of accounting, it is probably within these that accounting predominantly lies. It is not suggested that effort should be directed to determining whether accounting reality is mainly a social construction or whether it is a projection of human imagination, but rather that accounting researchers acknowledge these viewpoints as having a legitimate place in accounting. Although many people may believe that accounting is predominantly a 'concrete structure' and perhaps believe that this is all it is, Tricker⁽⁵⁴⁾ argues that this is not its primary nature when he states,

"... accounting is dependent on the ideology and mores of society. It is not value free. It is a child of its culture. Any claim to report objective facts has to be set into the context of the beliefs of that particular culture."

Thus the activity we describe as accounting encompasses a vast field of material from the phenomenological/psychological to the very concrete. For research to progress across these different elements, the accounting researcher has to recognise the alternative requirements in method and methodology. For example, Tricker⁽⁵⁵⁾ states,

"if a special plea may be allowed, it would be for new ideas, new approaches and more innovative solutions to problems at the interface."

and Laughlin⁽⁵⁶⁾ on the same theme calls for a,

"liberalisation on method so that knowledge can be increased."

In this regard, the pluralistic perspective allows for a

research approach to be selected depending upon the factors of the moment, thus moving away from the rule of logical and rational progression.

Stepping Outside the Disciplinary Matrix

Many of the difficulties in accounting arise from the fluid and unstructured nature of the business environment and the problems associated with predicting business capabilities in the future. From the late 1800's through to the 1940's much of the work of professional accounting bodies was aimed at reducing variability in dealing with many of these factors. The reduction in variability was achieved largely through fiat and the imposition of accounting concepts and doctrines, more recently referred to as accounting conventions. These have now become institutionalised to the extent that they are perceived by many to be similar to laws, yet they are no more than conventions. The logic justifying a particular approach often has no more validity than "that is what we have done in the past" or "that is what accountants do".

It may be argued that once working in a discipline few researchers appreciate that the voice of reason which drives their view of the world is little more than a reflection of their socialisation and education. The so-called appeal to reason is little more than a cultural statement, which becomes very soon one of self justification, or even self deception. Thomas alludes to this when he recommended the resort to the test of the intelligent layperson.¹⁸ Any method or approach should be capable of

18. Thomas held that the resort by accountants to accountants as a method of justifying and confirming their actions was tautological and so he proposed confirmation via appeal to those external to the discipline or area of study, that is, the intelligent layperson - "... it is circular to appeal to what other accountants would agree to or believe when one is questioning their basic ap-

being demonstrated and justified to an intelligent layperson. This appeal to persons outside the cultural setting of the discipline for acceptance (of method, methodology, or practices) was an attempt to confer legitimacy on accounting thought and/or action by providing a wider constitution and sanction for the action/decision. Feyereabend⁽⁵⁷⁾ talks in similar vein of the need for one to step outside of the area, and to subject oneself to external review. Thomas recognised that many accounting procedures are justified merely on the basis of convention and their justification rests largely on the education, training and socialisation of the group members. Thomas raises these arguments in particular reference to the allocation problem and specifically the depreciation problem. He argues that there is no rational justification for the present methods of both allocation and depreciation, the only justification is that of established convention. While it is a rational justification for a member of the group to do this, it is not rational in the sense of having internal logic. Thomas⁽⁵⁸⁾ on the question of allocation said,

"It should be repeated that there are limits to how far an allocation method need be defended. If the method chosen can be defended by an appeal to rules upon which an intelligent layman would agree, or by an appeal to economists' theories of allocation, the justification may suffice."

He goes on to say⁽⁵⁹⁾,

"Most of us, accountants and analysts alike, have honestly believed that, although allocations were admittedly a bit arbitrary, some allocation approach

...Continued...

proaches to allocation". (Thomas, A.L. The Allocation Problem in Financial Accounting Theory. American Accounting Association Studies in Accounting Research No. 3, 1969, Footnote 27.)

was appropriate to any given set of circumstances. Abandoning this illusion and recognising that allocations are really only a kind of ritual anarchy would be the first great step to accounting reform."

The problem is also commented on by Hatfield⁽⁶⁰⁾,

"... accountants are asked to perform the hopeless task of taking this economic continuum of chopping it up into arbitrary and meaningless lengths called a year and apportioning to each such year a proper part of the cost of a building which will last fifty years, of a machine which will be used for perhaps twenty years (or perhaps three), of a blast furnace which lasts ten and a stock of coal bought in December which will all be consumed before Spring again appears."

The views of Thomas and the fundamental problems described by Hatfield remain at the nub of the situation faced by accounting - that is, the resort to culturally based standards and conventions as a method of dealing with problems. Unfortunately the legitimacy of the methods employed have been seen within the context of the relatively closed culture of accountants. Added to this is the continuing stricture on accounting of having to perform on a daily basis the various activities of accounting.

All disciplines have a cultural setting which underpins the perspective and approach predominant in that scientific community. Thus there is no objective rationality which can be used to justify a single theory or method. Methodological and ideological pluralism is held to be not a symptom of chaos in a discipline, but enlightenment. The restriction of method based on what is considered rational by workers within an area, reflects those workers' own socialisation within the discipline as much as the internal logic or validity of an approach.⁽⁶¹⁾ To achieve some wider legitimacy, justification acceptable to an external

person is desirable, as proposed by Thomas in his resort to an intelligent layperson. There needs to be an incisive approach taken by accountants to ensure that appropriate and logical reasoning applies to different procedures.

Pluralism and Professional Groups

A characteristic that emerges within disciplines¹⁹ is the establishment of individual power bases and influence. Part of this involves the imposition of entry criteria entailing the acquisition of competence in particular procedures which establishes concurrently a disciplinary matrix (in Kuhnian terms) or a shared set of views and values. The processes leading to this shared set of values soon become bureaucratic and the layering of rules, both formal and informal, become a central part of the discipline. At times the preoccupation with rules and procedures overshadows the purpose for which the individuals initially grouped together. The outcome of the processes establishing a disciplinary matrix is that the worker within a discipline is blinkered to approaches and procedures that might overturn the existing core of beliefs. Feyerabend⁽⁶²⁾ views this as akin to a straitjacket and the rules ensure that,

*"... those working in the domain
may not unwittingly disturb the purity
[sterility] that has already been
achieved".*

The drive and vitality of the potentially imaginative researcher is progressively curtailed further ensuring that the boundaries of the discipline and its methods continue undisturbed. By ensuring a discipline's boundaries and methods remain intact, the positions of authori-

19. A discipline is defined as a grouping of individuals pursuing some shared commitments and espousing some shared professional beliefs (refer to earlier discussion of Kuhn's disciplinary matrix).

ty and members' power (who themselves have gone through the necessary hurdles to be accepted within the discipline) are also maintained.

Feyerabend argues that prescribed rules, procedures and particular methodologies limit the expansion of knowledge and prevent substantial progress in an area. The narrowing of the method and approach may allow incremental developments within an area, but they blinker members of the group to the wider perspective.

These characteristics of disciplines lead the anarchists to recommend that the concept of rationality, held so dear within scientific circles, be abandoned. As Feyerabend⁽⁶³⁾ states,

"It is clear, then, that the idea of a fixed method, or of a fixed theory of rationality, rests on too naive view of man and his social surroundings."

It is argued that the rational process is only applicable where rational personalities are served. Since the rationality criterion is applied by those who have already fulfilled the entry requirements to a professional group, it is a contextual rationality and may have no rationality if recourse is made to persons at large.⁽⁶⁴⁾ This intrarationality is demonstrated in the accounting profession concerning the nature of assets. An asset²⁰ is a bundle of service potential, but the Balance Sheet or Financial Statements do not include the value of individuals to a firm, nor is the value of educational, environmental and infrastructural support in a particular location included. On a conceptual level, the method of identifying income

20. Obviously many definitions and criteria for assets exist, however I have chosen service potential as it encompasses the key element of future benefit to the firm.

that is used by an accountant may have little extra-cultural logic. For example, capital gains are often not considered as income; generally no adjustment is made for price level changes (whether specific or general); and many rules are applied selectively such as the "lower of cost or market rule" where the value of inventory is decreased if the marketplace price decreases, but if the marketplace price increases the accounting value is not increased. This last aspect indicates that the market value is held to be objective, reasonable and persuasive when it is to the firm's advantage, but in the converse situation it is held to have less importance or materiality. One might wonder at the response of the intelligent layperson to these often arbitrary rules.

All these factors have accepted guidelines and conventions to encourage consistent treatment within the accounting culture. At the same time, however, intelligent external parties could reasonably take substantive argument with most of them. For example, there were many instances where the practice of revaluation of land and buildings carried out in New Zealand prior to October 1987 contrasted markedly with practices carried out from 1988 to 1990.²¹ While still relying on a resort to standards and conventions, accountants were seen to use situational determinants to justify the logic of an approach. I doubt whether intelligent laypeople would have sanctioned the revaluations. The

21. In New Zealand the examples of Chase and RSL are particularly relevant. In both companies, creative valuation techniques were adopted during the boom period having the effect of inflating asset values based on unrealistic assumptions about future capital value increases and including valuations well beyond the then current market prices. This was followed by substantial downward valuations occurring in 1988 and 1989, far in excess of the actual market value decrease. (Refer to Hays, P. President's Patch: Three Fallacies and a Truth. *Accountants Journal* v. 70(4), 1991, p. 6.)

nub of this argument is the intra-cultural context of legitimacy versus a wider extra-cultural context. The latter would mean that a global view of methods and procedures would be necessary and certainly that a weltanschauung view, if not as Feyerabend would argue a pluralistic view, should be adopted.

When an organisation or professional group is threatened then a response from the group on a non-rational (but nonetheless understandable, from an external observer's point of view,) basis takes place. As Feyerabend⁽⁶⁵⁾ notes,

"Even the most puritanical rationalist will then be forced to stop reasoning and to use say, propaganda and coercion, not because his reasons have ceased to be valid, but because the psychological conditions which make them effective and capable of influencing others have disappeared".

Hence the contextual rationality of disciplines and acculturation (socialisation) of members of the discipline are key elements in the argument for pluralism of theory and approach.

Feyerabend⁽⁶⁶⁾ states,

"The teaching of standards and their defence never consists merely in putting them before the mind of the student and making them as clear as possible. The standards are supposed to have maximal causal efficacy as well. This makes it very difficult indeed to distinguish between the logical force and the material effect of an argument. Just as a well-trained pet will obey his master no matter how great the confusion in which he finds himself, and no matter how urgent the need to adopt new patterns of behaviour, so in the very same way a well-trained rationalist will obey the mental image of his master, he will conform to the standards of argumenta-

tion he has learned, he will adhere to these standards no matter how great the confusion in which he finds himself, and he will be quite incapable of realising that what he regards as the 'voice of reason' is but a causal after-effect of the training he has received. He will be quite unable to discover that the appeal to reason to which he succumbs so readily is nothing but a political manoeuvre.

That interests, forces, propaganda and brainwashing techniques play a much greater role than is commonly believed in the growth of our knowledge and in the growth of science, can also be seen "

Acceptance of New Ideas

To Feyerabend⁽⁶⁷⁾ the refutation of a theory can often only take place when the alternative stands in marked contrast to the existing presumption of relationship. For one to see the alternative which is at substantial contrast one must make a substantial jump from the existing theory logic. Important elements of a theory may be seen better by contrast rather than by parallel analysis. Thus he argues for counterinduction whereby alternative and radical views explain similar bodies of data but have clearly different theory or construct systems. The objective of those seeking knowledge is not necessarily to make better predictions but to achieve an all-encompassing explanation of the universe. The only issue is whether the counterinductive theory better explains the data and whether it diminishes the anomalies that currently exist.

Feyerabend⁽⁶⁸⁾ argues that,

"it is 'experience', or the 'facts', or 'experimental results' which measure the success of our theories, that agreement between a theory and the 'data' favours the theory (or leaves the situation unchanged) while disagreement endangers it, and perhaps even forces us to eliminate it. This rule is an important part

of all theories of confirmation and corroboration. It is the essence of empiricism. The 'counterrule' corresponding to it advises us to introduce and elaborate hypotheses which are inconsistent with well-established theories and/or well-established facts."

Notwithstanding the argument for counterinduction by the anarchists, the process of discovering new insights by those working within a discipline must overcome the characteristics of professional groups which act to hinder knowledge discovery. New insights demand that a person acculturated to a group/discipline makes a radical switch to an alternative proposition which is likely to go against the tenets of the existing culture.

It is in the area of an individual's philosophy (and, dare one say, belief) that the greatest resistance to change is often found. Issues that do not intrude upon an individual's or society's belief/value system can be accommodated more readily than changes in, or threats to, matters of faith, belief and logic. New methodologies, new approaches to understanding, tend to go to the heart of an individual's belief system and thus are fiercely guarded from the threat of disruptive change. Change which dislocates a knowledge or belief base also threatens to radically alter the culture and power systems in which the individual exists as well as impacting on the training, socialisation, and perhaps the entire disciplinary matrix. A discussion of the changing of methodology implies fundamental change of an individual's constructs. The traditions and conventions within professions and disciplines (including accountancy) is one form of defence against such a shaking loose or gestalt switch.

Hence it is argued by anarchists that the consistency condition or the substantial improvement condition are in fact conditions for potential sterility and stagnation

rather than, as they are logically and apparently reasonably argued, for betterment and the orderly development of new ideas. The consistency condition tends to eliminate items because of lack of internal consistency rather than differences in facts or observation. For example, Galileo asserted that an item in free fall will accelerate at a constant rate. Newton asserted that acceleration is not constant but increases the closer one comes to the body that is exerting gravitational attraction. Newton's theory eventually superseded that of Galileo but only after significant research and debate and, more significantly, a Kuhnian gestalt switch was necessary for it to eventually overthrow that of Galileo.

One of the great challenges facing professions is that of allowing the continuance of democracy as well as free thought. Counterinduction and plurality of theory are essential if members are to maintain a discipline that is vigorous and dynamic.

There is a need for the researcher to reach out for new theories and to go beyond the boundaries of the 'normal' thinking of the group. Feyerabend⁽⁶⁹⁾ suggests that,

"we need a dream-world in order to discover the features of the real world we think we inhabit (and which may actually be just another dream-world)."

He suggests an alternative conceptual system that runs against the existing structures, theory and concepts. A strongly counterinductive and pluralistic approach is needed to accommodate this process. In so doing, members will be set against other members, dissonance will increase, conflict and stress will rise and security and complacency will be reduced. These factors will generally lead in the direction of an unanchored and dynamic environment of *anything goes*.

The Need for Pluralism in Accounting

A change in theory or hypothesis typically requires the new proposition to substantially improve the explanation or knowledge of relationships (data). If the new or alternative hypothesis incrementally improves understanding, the group or discipline will require, for consistency, that the old theory stand. This is essentially the Popperian view of knowledge development. Since the existing hypothesis or theory is accepted by the group, it will also have been well-articulated, well researched and debated. By comparison any alternative proposition will lack this depth of input. Hence the requirements for acceptance placed upon an alternative proposition (consistency and significant improvement arguments) are in most cases transparent arguments for retaining the *status quo*.⁽⁷⁰⁾

Since new theories would have to offer such monumental steps forward they would, in practice, seldom measure up. Yet if they were worked upon for a period of time they might offer significant new insights and discoveries. However the cultural process of acceptance and rejection ensures that most are rejected.

Once a process, method or methodology is established within a culture then it is extremely difficult to unseat that view, unless it is unequivocally superseded. Yet to achieve this requires the replacement concept or item to perform with great vigour from the earliest stage.⁽⁷¹⁾

Traditions and conventions within disciplines become then increasingly entrenched. The conditions that must be met for these to be overturned are conditions for potential sterility and stagnation not for the orderly development of knowledge as argued by the members of a discipline. The requirement for consistency confers rights on the existing

theory largely due to its temporal dimension.

Therefore the socialisation of members plus the group norms and conditions for alternative propositions straitjacket the perspective and thinking of members of that group. To enable a discipline to be dynamic and proactive, that is, seeking new insight and advances in knowledge (more than incremental progress), counterinduction and plurality of theory are prerequisites.

The challenge for researchers is to recognise the contextual rationality within disciplines and to discriminate between logical explanations and those that derive largely from entrenched conventions. This can be illustrated by the efficient market hypothesis (in its many forms) and trading on the stock market. Substantial research has gone into substantiating this theory to the extent that, in the finance area, it is perceived as something akin to a law that can apparently explain all situations. However, some commentators suggest different accounts of the operation of the stock market. For example, Rosen⁽⁷²⁾ provides a power and cultural analysis of the 1987 stock market crash which is in marked contrast to the traditional efficient market explanations. The response by the traditional analysts to evidence that might show non-adherence to the established theory is often to ignore it or to dismiss it by suggesting, for example, 'these findings are artifacts and do not fit the prerequisites for validation of the theory', or 'the sample size is too small', or 'the time frame is too short' etc. The general contention of the efficient market hypothesis continues to be supported by those within the discipline. Any inaccuracies and inadequacies of the theory are rejected as spurious (and not material) and alternative propositions are criticised or ignored. Acceptance of plurality of theory dependent on circumstance or problem

would help to overcome this restricting perspective within disciplines, but does require communication between proponents of the alternative views.

Multiple Theories Do Not Imply Pluralism Per Se

The accounting discipline draws from legal, social, political and economic elements. Thus there are likely to be numerous theories reflecting different elements of the discipline and these different theories may not articulate. These alternative theories should not be seen as pluralism *per se*, but merely a reflection of the diversity and scope of the accounting area. Those who accept the need for many theories in accounting have not distinguished between accounting as a homogeneous and single activity and accounting as a loose confederation of individuals pursuing ends in quite different areas to fulfill different needs. Internal financial accounting, external financial accounting, management accounting, cost accounting, marketing pricing, capital decision making, systems and algorithm developments, reporting on not-for-profit organisations, social accounting, human resource accounting, auditing, taxation, are to name a few accounting functions which themselves have quite distinct subparts, and are substantially different in nature. Thus the idea that a person is an "accountant" is a generic classification with such scope as to have little meaning. Analogous to these multifaceted activities are the different theories that exist within accounting. These are not indicative of counterinduction or pluralism, but are evidence of different methodological or theory approaches to different particular problem areas. Thus for accountants to be pluralistic and hence move towards a more emancipated and humanitarian profession, more theorising within existing areas of accounting must be encouraged and we must challenge accepted procedures with alternative views.

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- (72)Rosen, M. Staying on the String: The Yo and the Market in Eighty-Nine. *Critical Perspectives on Accounting* v. 1, 1990, p. 337-365.

CHAPTER NINE

CONCLUSION

The purpose of this thesis was to examine and criticise the principal extant theoretical paradigms of understanding in accounting with a view to offering guidance for future researchers in accounting. The applications, strengths and criticisms of the scientific approach as the dominant paradigm in accounting, and the alternative approaches to understanding in accounting have been discussed using a phenomenological approach. The phenomenological approach enabled the various attributes of different methodologies to be considered without privileging one particular methodology over another.

The practice of accounting has been, and is, a collection of various techniques and principles which often do not articulate. It was only after the Great Depression, and more noticeably in the 1950's and 1960's, that accounting practice was supported by theorising. Furthermore, theorising in the professional arena of accounting only became commonplace with the advent of the various conceptual framework projects of the 1970's. The focus underlying these projects has been the order of practice, rather than researching and theorising *per se*. Accepted accounting practice involves the use of various techniques, according to prescribed rules, on a pragmatic level with little theoretic justification. In contrast to this, in this thesis I have been concerned with thinking and knowledge in accounting and as a result of my researches I advocate a pluralistic philosophy. There is considerable difference between the pragmatics of numerous tools for practice, and theorising and knowledge gathering which admits alternative methodologies as legitimate.

The thesis traces a movement in the search for knowledge

and understanding from the structuralist, modern, scientific paradigm to an increasingly critical, contemplative and sociological view. These alternatives should be seen in the context of the continuing dominance of the positivist approach in much of the accounting literature. While there is a singular lack of conformity concerning the definition and elements of positivism, it is nevertheless the epitome of the scientific approach as it has been used in accounting. Despite some particularly eloquent deconstructions and criticisms of positivism, it has been a driving force in economics and accounting from the mid 1950's and is currently the dominant force in accounting literature. Scant regard is generally given to the shortcomings of the positivist approach and it is as if we have said 'yes' to the criticisms and then turned the page and forgotten them. Feyerabend⁽¹⁾ sums up the naivete of the positivist assumptions when he says,

"Pre-Kuhnian positivism was infantile, but relatively clear Post-Kuhnian positivism has remained infantile - but it is also very unclear."

Feyerabend comments that the response of many of the positivists has been to incorporate the jargon of critics while continuing with an empirical approach, making what Feyerabend calls "empty gestures"⁽²⁾.

Why then has positivism continued so strongly in spite of devastating attacks upon its hardcore? There is no outstanding single reason for this and within the thesis I discuss some of the contributing factors such as:

- the personal strength needed to step outside of the paradigm and advocate a bold, new approach to knowledge and understanding;
- the pragmatics of achieving research publication given that the majority of accounting journals favour empirical work. In such foremost journals as *The Ac-*

Accounting Review and the *Journal of Accounting Research* one can discern a predilection for quantitative, market analysis work, rather than exploratory or contemplative pieces of work;

- the superficial appearance that undertaking quantitative research is more cost-effective and low-risk than the more esoteric and contemplative studies. Using the framework of positivism, certain guidelines can be followed and the structure so provided means that little regard is needed for alternative views.

As has been discussed, the scientific approach is difficult to define since it is not one methodology but a plethora of different emphases making it impossible to say what the scientific approach is. I suggest three hardcore attributes which determine a scientific approach: rationality, causality and empiricism. Yet to adhere to these is in itself an act of faith and the belief in empirical objectivity and neutrality of the observer, whether in the natural sciences or the so-called social sciences, is an heroic gesture.

Nevertheless, accountants have taken on board the scientific approach under the guise of positivism and have moved into a deductive, Popperian mode through much of the 1960's to 1990's. The work of Watts and Zimmerman and Jensen has provided an important base for much of the debate in accounting concerning the scientific approach, as they have encapsulated most of the shortcomings and strengths of the scientific approach. The preeminence which positivism enjoyed moved to the stage where it was (and still is by some) perceived as the only basis for knowledge derivation, leaving no room for thought or ideas that do not subscribe to its tenets.

However to consider the scientific approach (and positiv-

ism) as existing in isolation from the political and social setting of research is naive and limiting. Kuhn has been particularly distinguished as providing an historical, relativist analysis of the growth of knowledge. Although Kuhn is classed as a weltanschauung writer due to his relativist and world view appreciation of the issues concerning the growth of knowledge, he is nevertheless a conventionalist. Kuhn's stance is midway between positivism and the more radical, relativist positions. Kuhn saw the development of knowledge as a series of periods of normality inter-dispersed with earth-shattering discoveries that forced a revolution in the way that scientists viewed their particular area of knowledge. The move from one period of normal work (normal science) was likened to a religious conversion or a gestalt switch. The switch was so profound that scientists working within one body of normal science could not understand the arguments and bases of the position of those working in another disciplinary matrix.

The parties effectively talk past each other and can only understand the position of the other by a shift in faith. The gestalt switch is an overthrowing of the old order and the accepted norms, exemplars *etc* and an acceptance of the new, such that the converts to the new disciplinary matrix can hardly believe they were ever part of the old. Thus knowledge progresses via a series of radical advances.

The other significant attribute to flow from the work of Kuhn was that of the concept of the paradigm or, as referred to later in his postscript, the disciplinary matrix. The disciplinary matrix is a social, peer-based way of understanding how knowledge is advanced both in terms of gaining greater knowledge via incremental work and also via the dissemination of knowledge to outside parties by way of education. There are four key elements of the

disciplinary matrix:

- the shared community structure bound together by the sharing of similar education paths and professional institutions. Kuhn⁽³⁾ describes these groups as,

" ... the producers and validators of scientific knowledge."

- the commitments of the group such as symbolic generalisations.
- values which are necessary, as Kuhn⁽⁴⁾ says, since

"Judgments of accuracy are relatively, though not entirely, stable from one time to another and from one member to another in a particular group. But judgments of simplicity, consistency, plausibility, and so on often vary greatly from individual to individual."

There are many situations where value judgments must be made and it is important that when these judgments are being made similar value structures guide the scientist.

- exemplars which are shared examples used throughout the discipline for the education and training of its members.

I believe that the most significant contribution of Kuhn's work to accounting is his concept of the disciplinary matrix. The revolutionary development of knowledge is a specific theory of knowledge progression which is subject to empirical analysis (although this must be considered extremely difficult) and in my view does not apply universally. However, the concept of the community of people (for example, accountants) sharing values, language, examples, who undertake and validate knowledge and understanding is an important move from the objective, law-uncovering direction of the positivists.

Kuhn's work suggested that the laws "as in the natural sciences" are laws not of the objects but of the group itself. The process of the gathering of knowledge and the determination of what is acceptable knowledge or not is a group process which may be defined within the disciplinary matrix. The significance remains that it is the group that decides what is admissible knowledge, behaviour etc and what is not, whether in the natural sciences or in the social sciences.

The positivists hold that there is an objective reality that may be explored to provide a definitive answer to a particular question. Kuhn maintains that this only exists for periods of normal science and even these periods are in fact only 'normal' insofar as the group of scientists is concerned. However he does indicate that community members will use 'scientific' inquiry largely in the normal science period.

Held⁽⁵⁾ sums up the aspects of social reality that are excluded from the positivist view of reality as being,

1. different meanings that the subject/object might attach to his or her actions;
2. the way in which social relations may be organised to avoid certain types of actions or expressions; and
3. the possibility of things being not what they seem and alternative explanations being plausible.

These then demand an alternative approach to understanding and knowledge gathering that is not restricted by ideology. The hermeneutic analysts (and in the thesis I refer particularly to Gadamer) adopt a relativist and primarily interpretive position in their textual analysis of behaviour. The significance of the hermeneutic approach is the bringing together of the analyst and the researched in a form of conjunction such that there is a melding of the

views of the researcher (the interviewer) and the interviewee. Certainly there exists much criticism of the hermeneutic approach due to its substantial dependence upon the language of the interchange and of the scene under analysis. The critical theorists and, in particular, Habermas have strongly criticised this dependence, based on the view that language may cover a multitude of meanings and be interpreted in many different ways even in the obverse, such that language can only be successfully analysed from a critical and sociological perspective. We see here a linkage between the hermeneutic and the critical theorists such that critical hermeneutics comes close to, and almost indivisible from, the critical theorist's approach. Neither of these approaches are singular approaches, but are groupings of many views which at times are quite disparate. Their focus is on careful analysis within a social and historical (temporal) setting, such that, as far as possible, one considers the subject within the domain of their normal and (for the sake of the particular analysis) particular activity.

Hermeneutics and critical theory may be classified as part of the postmodern in that they are a reaction to and against the excesses of the modern, specifically the scientific and positivist approaches. However both hermeneutics and critical theory have substantial time for and embody elements of the scientific. For example, Schutz sees a positivistic role in the analysis of language and situations via the definition of various elements. Habermas too saw the use of science as a great liberating tool whereby the common workers could be made better off by the dispelling of the excesses of religion. Habermas notes however that the benefits of technology and science have been alienated from many of the ordinary people and been captured by those with power who have, via the capturing, enhanced their position and power.

There are of course substantive criticisms of the interpretive and relativist forms of analysis. The issue of language and its legitimacy has already been alluded to, but one of the more fundamental criticisms is that of the relationship between the interviewer (researcher) and the interviewee (the subject). In both hermeneutic and critical analysis it is assumed that the interviewer can move into the situation and with empathy soak up the key elements of the particular issue under analysis. But where do the ethics, beliefs and prejudices of the interviewer begin and end and to what extent can the interviewer take on a clean slate, move into a situation, undertake the analysis and then move out? There is no closure on these issues. The relative importance of empathic involvement versus objective observation has not been determined and varies from writer to writer and from situation to situation. It is my view that there is much to be gained by case study and ethnomethodological work. However, the benefits claimed for this sort of work must be subjected to substantial scrutiny since I believe that, in most cases, the mind-set and cultural history of the interviewer will not be left behind like a set of discarded clothing before donning a new costume with which to meld into the mind-set and social views of the interviewee. As a result, issues of prejudice and bias potentially disable the approaches and the generalisability of knowledge or theories that may be derived. Not the least of the problems is that it is not known to what extent bias, prejudice, or beliefs have impinged on the knowledge gathering process especially where the interviewer and interviewee closely interact.

The benefit of these approaches is that they enable the researcher to go beyond descriptive quantitative measures and proxies that have traditionally been used in the scientific approach. These approaches emphasise the social

and cultural basis of knowledge gathering, but most importantly they have continued to de-privilege the traditional scientific and positivist approaches to understanding. Critical research and hermeneutic analyses are not in themselves non-scientific, but they represent a loosening of the parameters under which we typically describe science, namely a move away from the use of numbers to the use of words, a blending of the objective/subjective dichotomy, while still holding to beliefs in causality and explanation. They are an enhancement of the scientific and not alternatives *per se*. In fact the derivation of theory implies the belief in structure even though the forms of analysis may be different for its garnering.

As Bhaskar⁽⁶⁾ says on science,

"things exist and act independently of our descriptions, but we can only know them under particular descriptions ... science ... is the systematic attempt to express in thought the structures and ways of acting of things that exist and act independently of thought."

I finally considered the postmodern - those approaches that have their origins in the criticisms of the modern, particularly the work of Feyerabend but also Lyotard and Foucault. The postmodern as seen by Feyerabend is very much a pluralistic approach whereby knowledge and life become a relativistic experience where anything potentially goes, and where what we believe to be, becomes what is, in other words, knowledge. This nihilism - or, in the negative, everything stays - would appear at first sight to provide a plethora of options such that one is left in a universe of everything and nothing. The essential elements of the modern are total weight on method, no emphasis on insights or metaphysical cogitation (as being the constructs of subjectivity) and an objective, determinate world. To talk of the end of modernism means the end of

the subject and the end of the objective world. This consequently leads to the end of such concepts as truth and knowledge where they are used in an absolute sense relating to objective representation.

Feyerabend argues that methodological prescriptions do no more than constrain the research methodology and the method and, at worst, also constrain the perspective that the researcher brings to the subject under analysis. He goes on to say that any views that hold to a particular approach can not be historically justified and that at any time in the past we can find examples where particular rules have not been followed. In some respects Feyerabend uses an historical approach to demonstrate that no one particular rule (whether it be methodology or method) holds and in fact, from an historical perspective, *anything goes*. Feyerabend demonstrates that history is full of accident, juxtaposition and complexity as well as the unexpected and the non-obvious. This means that a liberalising of approach will not be a sign of indiscretion or lack of methodological understanding, but it may reveal the search for a greater awareness and a more profound insight into that which is under investigation.

One of the criticisms of Feyerabend is that the *anything goes* philosophy may provide no guidelines for the researcher, except that the researcher may pursue any end by any means. This is not the case. Feyerabend discusses at length issues of cultural and social pressures and the need for stability, and the manner in which groups of people work together to pursue common ends and at the same time share common purposes. This parallels the peer concept espoused by Kuhn and the disciplinary matrix. To Feyerabend a researcher should be free to pursue whatever ends that person wishes by whatever means, while at the same time recognising the social pressures that any re-

searcher operates under. Feyerabend asks that we do not restrict a person to a particular methodology or portfolio of methodologies on the basis that these are right, predicated on a particular ideological position, merely that if we are to restrict somebody to a particular approach then we say that it is as a result of working within a particular paradigm and explicitly accept the method as a matter of faith. The overriding principle of pluralism is that no one methodology or method has a better claim to understanding than another.

This is a pluralist position since any methodology or method that is held to be appropriate by the particular peer group is a legitimate means of furthering 'knowledge'. The implication for the researcher is that in every piece of research, judgments must be made on the choice of methodology and that methodology should not be followed blindly. Any method or approach must be adopted and defended because it is the appropriate method (or so judged by the researcher) in the particular situation.

A number of guidelines are provided for researchers within a pluralistic approach. Feyerabend calls for the use of counterinduction notably to limit the curtailing nature of induction and to widen the net by which theory may be gathered (and hence knowledge). The use of counterinduction involves a dialectic-like approach whereby conflict is introduced by alternative approaches that stand against confirmed theories and facts but may have their own fact- and theory-support. The corollary to counterinduction is pluralism, allowing for alternative theses to exist alongside each other. Rather than being a radical approach, Feyerabend suggests that pluralism has in the past been one way by which advances have been made and that the argument against pluralism - that is encapsulated essentially within the Popperian approach - does not fit with

historical reference. The use of pluralism will imply the use of *ad hoc* hypotheses to protect the alternative new theory especially in its early days. New theories are likely to be exposed, loosely defined and perhaps, quite easily rejected (falsified) due to their embryonic form. Thus the use of a protective belt of *ad hoc* hypotheses is essential to enable new theories to stand for some time and allow for the work of people in the area to further refine and develop them. Traditional scientific research methodologies do not allow for the use of *ad hoc* hypotheses. Lakatos advocates the use of *ad hoc* hypotheses in the development phase of theories but does not accept them as a blocking measure. Feyerabend argues that only by explicitly blocking the deconstruction of early theory can theory progress to a level where it can stand in its own right. The final recommendation of Feyerabend is the acceptance of incommensurability within a discipline or paradigm. Incommensurability implies that alternative and even dramatically opposed theories can exist side by side within a disciplinary matrix such that there is ongoing conflict and interchange between the advocates of each approach. This dialectic leads to a critical and energetic testing and validation of hypotheses.

Implications of the Postmodern

The liberalisation of thought and de-privileging of methodologies is central to Feyerabend's *anything goes* approach. However, survivability within a discipline almost always implies alienation from the very ideas that might lift the discipline to a new level or shift it to a radical posture. Those who are powerless are forced to adhere to the value system of those with power and in so doing, become socialised to the extent that the radical and pluralistic views that they might have brought are gradually expunged from their thought and value system. To this end, Feyerabend⁽⁷⁾ maintains that,

"... the best defence against the ideological street singers they were about to meet; ... consists of immunising people against systematic attempts at education."

The implications for researchers and for the passing on of knowledge are substantial. Within a 'normal science' period researchers may blindly follow the methodology of their peers and so be beyond methodological criticism. However pluralism by its nature rejects set procedures and guidelines leaving little guidance or established career path for the new entrant to follow. If we adhere to competing methodologies, pluralism and incommensurability, a strong basis is not provided for the new researcher (or even the old); to live against and within the established mores of culture demands intellectual stamina and strength.

The postmodern is also criticised given the requirement of necessary performance which is increasingly driving the research and academic communities. This requirement is linked to measurable output and rapid results. Lyotard in particular refers to the suppliers and users of knowledge and the relationship of consumerism and the new mercantilist drive that is overtaking research and knowledge - either one is producing what one chooses to produce or what others decide you shall produce. A person working within the postmodern is as Lyotard⁽⁸⁾ says,

"A postmodern artist or writer is in the position of a philosopher: the text he writes, the work he produces are not in principle governed by preestablished rules, and they cannot be judged according to a determining judgment, by applying familiar categories to the text or the work. Those rules and categories are what the work of art itself is looking for."

Within the postmodern there are no longer any underlying

fixtures or guidelines besides that which one must do oneself. Lyotard⁽⁹⁾ says,

".. it must be clear that it is our business not to supply reality but to invent allusions to the conceivable which cannot be presented."

Lyotard⁽¹⁰⁾ gives amplitude to what Feyerabend has said when he talks of the relationships of capital to discovery,

"When power is that of capital and not that of a party, the 'trans-avantgardist' or 'postmodern' (in Jencks's sense) solution proves to be better adapted than the anti-modern solution. Eclecticism is the degree zero of contemporary general culture: one listens to reggae, watches a Western, eats McDonalds food for lunch and local cuisine for dinner, wears Paris perfume in Tokyo and 'retro' clothes in Hong Kong; knowledge is a matter for T.V. games. It is easy to find a public for eclectic work. By becoming kitch, art panders to the confusion which reigns in the 'taste' of the patrons. That this realism of the 'anything goes' is in fact that of money; the absence of aesthetic criteria, it remains possible and useful to assess the value of works of art according to the profits they yield. Such realism accommodates all tendencies, just as capital accommodates all 'needs', providing that the tendencies and needs have purchasing power. As for taste, there is no need to be delicate when one speculates or entertains oneself."

This is a shift from the position of adherence to rules and structure, a belief in the positive, to a belief in a radical form of relativism, but it is not to that extreme form of relativism/nihilism that the thesis holds, rather it is to a more diverse and empathic approach to the paradigms of understanding that I hold and advocate for future researchers in accounting.

I believe that only a few stalwart individuals could sustain a life of such extreme existentialism since most individuals need structure to their world. Let us then move back from this *avantgardism* to a state which has structure, guidelines, and belief, but within which there is flexibility and the room for incommensurability. The structures that are provided should be seen as social customs and not as infallible rules as we might have thought. These structures are explicitly understood to be the rules of society, the rules of groups of individuals and the rules that one individual might accept so as to gain the wider acceptance within the group or by another group. These rules are not structuralist fundamental rules, these are not the rules of positivism, they are the rules of morality that individuals take upon themselves. They provide a structure, they provide guidelines but they are not brought forward under the guise of laws but under the realisation that they are relativistic norms. Such structures will change and hence methods of understanding will themselves be open to interpretation and change.

Implications for Accountants and for the Future of the Accounting Profession

This thesis has explored the development of thought and thinking in accounting with the purpose of better understanding and evaluating the origins of our knowledge gathering as accountants, and in order to provide guidance for future researchers in accounting. In many ways the knowledge gathering in accounting from the late 1950's through to current times can be described as the golden age of thinking in accounting. This era marks a crucial change in the nature of the discipline from one that was highly pragmatic with theorising rooted firmly in practice, to one where accountants seriously consider the nature of thinking and knowledge and subject themselves (and their discipline) to more rigorous scrutiny.

At this stage it would be satisfying to say that there is a clear answer and in fact many have sought closure on the area of accounting thought, particularly via an all-encompassing theory. I take a quite contrary view and conclude that the only closure that can be brought to the area of accounting thought is that there is no closure. This mirrors Feyerabend's view that *anything goes* and that we must break down any arbitrary or imposed barriers to thinking and openly adopt a pluralistic approach to theorising.

There is much to be gained from the use of structuralist, positivist analysis and the use of numbers particularly in a social setting where economic performance is so valued and is considered to be the key criterion for judging effective performance. On the other hand I maintain that the social elements of accounting and wider issues of accountability are so important that they cannot be ignored; in the past we have minimised their importance to such an extent that they have been almost discarded as being immaterial to accounting and accountants. The embracing of a wider social perspective and with that a broadening of the role of accountants leads me to take on board the views of the critical theorists, the hermeneutic analyst and of the postmodern; it is this latter area which I would advocate as an area of development for accountants and accounting thought, if for no other reason than to liberate some of the thinking that has anchored (and fettered) the mechanistic and structuralist world of the positivist. My recommendation for a move towards pluralism is analogous to the feminist movement of the 1960's and 1970's, that is, the need to break down the strictures which society (people) has placed upon itself (themselves), in order that people can explore and develop and actualise themselves. In this regard my plea follows closely from the third cognitive element of the critical

theorist, that of emancipation and the overthrow of the alienation suffered by many persons. One may well ask how does this conclusion affect accountants?

Concerning Education

Feyerabend has offered some pertinent comments on how the researcher under a pluralistic *regime* might proceed and the influence of universities in thought development. One of the fundamental problems of our training of accountants is that those who have power and authority within a discipline will, knowingly or not, tend to protect their position and put in place entry codes and seniority requirements consistent with their own path (to membership of the discipline) and predilection. The rules which are put in place will, in a mature profession, typically involve the development of technical excellence rather than the ability to think *per se*. Thus we subject the student to an indoctrination of five to seven years such that at the end of this time s/he is effectively moulded into the disciplinary matrix of the established accounting society/culture. By the end of this time the likelihood of radical and alternative views being proposed has all but disappeared. The likely result of this continued acculturation is that the profession will become increasingly insular and will incrementally depart from its *raison d'etre* to the extent that there might even be some revolutionary and fundamental change when the disparity becomes too great. At that stage there would be a golden opportunity for putting in place new processes and bringing forward persons with alternative views. Unfortunately these views and structures will frequently become the tools with which to inculcate future generations and they will be the tools of domination as the new leaders become old leaders. I see little way past this dilemma, except perhaps through a liberalisation of the training and education that is given to our students. One of the pri-

mary shifts I recommend is from the requirement for technical excellence to that of intellectual excellence, whereby dialectics, Socratic argument, pluralism, and counterinduction are encouraged. Only by broadening our views on knowledge and breaking down the imposed barriers to thinking will we be able to foster a more liberal and receptive group of accountants, whether practitioners or academics, in the future. The students we teach in this manner do not have to be the innovators themselves as long as they take forward the ideas that innovation, radical thought and a pluralism of views is to be encouraged rather than being ruled 'out of order'. Feyerabend⁽¹¹⁾ can have the last word again,

"... the best education consists of immunising people against systematic attempts at education."

Thus my objective is to set the students against each other (from an intellectual perspective) and to force them to challenge their underlying assumptions - those directly concerning the research and also those defining their own cultural bias - so as more genuinely to understand the limitations of their understanding/knowledge.

Concerning the Researcher, Social Norms and Communication

So to the other key issue - in the pluralistic regime what guidance can be given to researchers and those theorising in accounting? One approach I recommend is to encourage all advanced students and researchers to read and discuss works such as Feyerabend's *Against Method*; to entertain alternative and perhaps extreme radical positions; and to broaden required reading to encompass political and philosophical developments. I am advocating an enlightenment to 'things social' - that all research occurs within a social setting and the gathering of knowledge within a discipline (whatever its technical nature or function) occurs according to that discipline's social mores and consciousness.

On a practical level the student researcher and thinker should be encouraged to use alternative and radical approaches to analysis and to analyse a particular issue from multiple viewpoints, thus enabling the researcher to discern how the outcomes articulate with one another. For example, research to evaluate the performance of a State Owned Enterprise may have radically different results depending on the research position - analysis from a 'new right' position compared with analysis from a social welfare perspective. If these two research perspectives produce substantially different results then one might suggest that the outcomes are little more than confirmation of the ideology of the researcher's stance. Subjecting research questions to alternative research approaches, themselves based on radically different disciplinary matrices or social assumptions, is one way of alerting the researcher to the frail nature of the constructs under which s/he operates.

To achieve this end there is a need for a much higher level of understanding of research methodology, knowledge gathering and consideration of thinking in accounting. This will not be achieved by traditional research methods courses in which a number of set processes are put forward for the researcher, but by an unfettered and genuine exploration of radical methods of knowledge gathering.

Thus the only method that I recommend is that of pluralism - research that is not bound by any existing structures and where numerous ways of researching and thinking about a particular issue might be pursued at the same time. Thus pluralism allows for diverse and innovative responses to situations by a stepping outside of the standard and pre-determined approach. Pluralism also allows not an *a priori* choice of methodology but the pursuance of competing methodologies at the same time. By pursuing pluralism the

researcher is not forced to make *a priori* statements about ontology and methodology nor about the nature of what is being considered. Considerations of this sort can be left until the researcher is further down the research track. Therefore pluralism encourages a loosening of the structures of thinking. It is this breaking down of the structures of thinking in accounting that I am advocating.

A pluralistic approach draws from different *regimes* and assumptions. In such a world how do we proceed since all knowledge claims are presumably as legitimate as each other? In an extreme position this is of course correct - that there is by definition no right or wrong and an absence of evaluative criteria.

However we do not live in a world driven solely by intellectual and theoretic constructs, we also live in a world where members of society must continue to live their lives by whatever standards that are socially acceptable and where humans can develop as a species. It appears eminently reasonable that groups of people will band together and establish social constraints and norms to guide the development of those particular groups. It does not matter whether these are groups of accountants or lawyers, the importance of the establishment of group norms to the members, and particularly to those who have power within the group, is that the group norms be recognised as no more than relativistic norms endorsed by the group; they do not reflect fundamental laws or truths such as we might ascribe to the natural sciences. This is the major distinction between the accountant and the natural scientist and the nature of knowledge in the two areas. The scientific approach was always seen as a way of uncovering fundamental laws which researchers genuinely believed were there to be discovered. However no such laws exist in accounting as accountants function within society for

various roles and ends and are constrained by the social customs and acculturation of that society. Thus it is entirely legitimate within accounting to move from a radical research *regime* to one that establishes social guidelines, as long as when moving between positions the intellectual basis of pluralism from which one has come is not forgotten. If we were to adopt this basis for research and knowledge derivation in accounting, then thinking and research in accounting would be strengthened and enlivened.

Several subsidiary results also flow from this approach. Firstly a counterinductive and pluralistic approach places an onus on the researcher to consider and debate the merits and appropriateness of the particular research perspective. It also puts significant responsibility upon the reader to be more empathic when reading the results. In this regard I recommend a more critical hermeneutic perspective for the reader so that s/he goes behind the words and attempts to understand the position of the researcher. Under this approach much depends on the communication between researcher and reader. It also negates the simple slogans of positivism (and other paradigms) and requires a much deeper understanding of the merits of the various approaches. Within a pluralistic position the approaches are only seen as particular ways of viewing a situation or issue such that a research project may have two or three alternative research paradigms in use at the same time.

Outstanding Issues and Future Research

In undertaking work of this nature a number of areas of potential interest and importance are uncovered which are close to, but outside, the scope of the thesis. There are also a number of issues that arise directly from the thesis. Both of these aspects are dealt with here in order

that some who read this thesis may be interested enough to take up the challenge of further research.

A major challenge for researchers is to integrate the scientific approach with those of social science, in particular sociologically-based methodologies within particular research studies, in order to better understand the observed (and themselves). Research approaches that triangulate within projects should be encouraged in the future. Research methodology that is stated in the singular should be broadened to encompass methodologies which may currently be viewed as conflicting. For example, a research study on reaction to new rights issues could include regression analysis to test reaction time but, concurrently, could also involve the researcher undertaking phenomenological research within a stockbroking firm as to the processes involved in reaction to the rights issues. The resultant work would be more descriptive and, potentially, would have improved explanatory value particularly in terms of the social meaning of the part played by stock markets, the firms themselves and the individual players. 'Multiple methodology' research thus potentially offers a significant explanatory advantage over singular research methodology because it explicitly seeks out the multi-dimensional nature of that being researched. Such research may better suit research teams rather than one individual and while this would involve greater efforts in coordination, a genuine team-based undertaking could enhance the multi-dimensional view of the object under consideration. Finally, such research findings should be more relevant to the practice of accounting since the research would have involved the close correspondence of the researcher and the participants, hence emphasising the social and applied nature of accounting and the integration of research and practice.

The second challenge, which flows from the former, is to encourage the use of social science approaches, theories and knowledge in accounting. If we accept that accounting is part of social science then we need to be much more energetic in stimulating research that centres on the human/social dimensions rather than the often crude proxies that we tend to tolerate. Despite much work in this area over the last decade, I feel that continued emphasis in this regard is imperative to maintain researcher's awareness of the limitations of mainstream accounting research.¹

Another area for future research is that of guidelines for undertaking pluralistic research (as opposed to merely encouraging such undertakings). Such work would need to consider parameters for effective and efficient research. By formulating such a paradigm researchers would be able to proceed without endless reiteration of methodological arguments. It is clear then that I am not arguing for a methodological anarchism (although I do not exclude this) but a methodological diversity. This is not an easy option for the researcher since deliberate choices have to be made after careful consideration of the issues and not by random selection. Part of the future work in this area of pluralistic research would also need to consider the choice processes and in particular the ontology to epistemology to methodology sequence, whether these three aspects be a progression or form points of a triangle (and hence avoiding a decision hierarchy and so changing the decision process into a more integrated and iterative

1. Mainstream accounting research is used here as per Chua referring to, inter alia, a belief in: physical realism, objective reality, quantitative data analysis, humans as passive objects, and rational and utility-maximising individuals (Chua, W.F. *Radical Developments in Accounting Thought. The Accounting Review* v. 61(4), 1986, p.611).

model). Such issues need to be addressed to assist pluralistic research design decisions.

Postmodernism is wide open to accounting writers. In particular the nature of the postmodern and the implications for accounting need to be explored. In this way we may better understand the accounting discipline and its role within society. In particular, future work could consider themes and writers from the postmodern and, at the risk of being labelled structuralist, future research could outline assumptions, approaches, tenets, and ontological issues of the postmodern to de-mystify the area for accounting researchers. Following from this, further work could analyse accounting literature since the early 1970's specifically identifying the trend from the modern to the postmodern and the extent to which accountants (academics at least) are adopting a more postmodern position.

Lovering⁽¹²⁾ suggests that the 1970's saw the development of a new epoch in Western countries. The 'Fordist'² ideologies that had dominated since the 1930's came under threat from postmodernism. Scherrer develops this theme using the examples of US Steel and automotive industries where there has been a strong move to smaller specialised plants and to innovative management and personnel practices. The result has been a more flexible work environment. At the same time, social commentators (philosophers) such as White⁽¹³⁾ point to the increasing attacks on the grand narrative (or metanarratives) of the modern and the increasing pressures from the postmodern (in whatever form

2. Scherrer defines 'Fordism' as "... in social theory, it connotes a phase of capitalism that is marked by mass production for mass consumption." (Scherrer, C. Seeking a Way out of Fordism: The US Steel and Auto Industries. *Capital & Class*, v. 44, Summer 1991, p. 116.)

one may see it!) for change. The effects of such attacks have been (and probably will continue to be) a destabilising of the existing social ideologies of capitalism and their supporting power systems. In particular, the structuralist/functionalist/fundamentalist narratives legitimising those social ideologies are being undermined. The outcome is likely to be a much more dynamic and unfettered environment similar to that described by Lyotard in Chapter Eight. What then is the implication of this for accounting? Puxty⁽¹⁴⁾ refers to the,

".. theoretical bankruptcy of conventional approaches to management accounting."

and further⁽¹⁵⁾, to the,

".. arid economism ... where a small number of researchers were, in effect, talking only to themselves."

While Puxty is referring to management accounting, I consider that his views justly reflect accounting in general. Although numerous accounting writers³ have deconstructed the metanarratives of mainstream accounting, accounting research and practice in general continue largely unaffected by, and I suspect largely uncaring of, the changes taking place in society. One of the greatest issues for the discipline of accounting to confront will be the implications of postmodernism. The challenge is to move beyond the often crude empirical testing that so dominates current thinking, to the postmodern - to move from the comfort of relative order and control of the modern, to the insecurity and openness of the postmodern. Exploration of the implications of the postmodern for accounting should be a major focus of future research.

3. Refer to Chapters Six, Seven and Eight.

Peroration

The scientific approach has found substantial support within the accounting community but we have spent little time as accountants understanding what the scientific approach really means and what it entails. Even here at the end of this thesis I can not provide a simple statement as to what is science and what is the scientific approach. Science may range from extreme inductive empiricism through to the science that is claimed to exist in hermeneutics and case studies. However, I reject the argument that the scientific approach is found in case studies and hermeneutics. The essence of science (that is, the belief in rationality, causality, and empiricism) is, I believe, largely anchored to empirical research having similar attributes to research within the natural sciences. Within accounting, stock market performance, issues of audit compliance and the statistical testing thereof, and areas where empirical data lead to statistical inference and where experimentation and structured research can be established, are what I believe to be scientific.

While there are strengths associated with scientific research, these do not mean that the scientific approach is universally appropriate nor that its use confers some automatic legitimacy to the research. The corollary is that knowledge or understanding that has resulted from a process that is not scientific should be included in our body of knowledge. The use of interpretive, case study, or ethnomethodological approaches are legitimate in their own right. Researchers working in these areas should not need to resort to a claim that their work is scientific or pseudo-scientific.

Science appears to have no structure that is common and elements of science that exist in certain circumstances

will be found to be lacking in others. The type of work that individuals such as Einstein and Bohr have advanced is quite different from the research teams patiently working away at incremental refinement of techniques. In some cases knowledge has been gained as much by good luck and random chance as by scientific enquiry. When this happens we should be prepared to accept the knowledge and the chance insight that has taken place. The accounting researcher needs to begin thinking in more complex and divergent fashions. The researcher can no longer merely slip into the groove of a particular research methodology (or method) so adopting a label of positivist or ethno-methodologist. The issue of methodology is of critical import. However, to adopt a more weltanschauung, innovative, flexible but also complex, approach to research implies a breaking of established norms and much more attention being given to explanation and justification of approach and methodology, such that the results may only be interpreted after a thorough understanding and discussion of the methodology. Thus attention is required not only on behalf of the researcher but also the reader.

A pluralistic approach places greater responsibility on the researcher and the reader, for no longer can lip service be paid to statements of methodology. To genuinely embark upon this approach would require a much more empathic reading and appreciation of research. If an interpretive approach is pursued then rather than discriminating on the basis of an alternative paradigm the reader will discriminate on the basis of methodology and then method. In this way the results can be seen in their own right. This implies the non-privileging of one technique over another.

Pluralism does imply that everything stays but it also implies in my view that not everything stays for everybody

since one individual is incapable of spanning the gamut of ideas and views. It is probably human nature to feel more comfortable with particular areas of thought and approaches. The need for some structure to our individual world means that an *anything goes* approach can not be maintained on an individual basis across time. Over time an individual may move from an interpretivist position to a more empirical, scientific outlook and this would be considered legitimate by that individual and by the community of which s/he is a member. However as we eliminate rules governing research, and hence the derivation of knowledge, so individuals and communities of workers will probably establish customs and social norms to help provide structure in which to work. Thus pluralism does not imply an anarchistic colossus of negatively based individuals pursuing their own narcissistic ends. It implies a plethora of approaches certainly. But these approaches will tend to be pursued by different groups following different methods at different times and within these groups there will be established norms and, in Kuhnian language, disciplinary matrices which will guide the community of scholars.

The importance of this approach is that we are not prescribing any one method or methodology, we are not privileging the positivist approach over the ethnomethodological or *vice versa*, and we are leaving the gamut of approaches open to individuals. A particular approach is held only as a belief statement by an individual. Knowledge, for example, is what we believe it to be whether on an individual basis or a group basis.

The presumption that technology and science is the way to progress is understandable given the substantial advances which have accrued to humankind via the use and application of the scientific, technological approach in the last

two hundred years or so. Scientific dominance may not however be the way forward in another two or five hundred years. Within that timeframe a more community-based, 'small is beautiful', Schumacher-type view of development may well emerge such that issues of betterment may no longer be judged in terms of wealth and income - essentially measurements derived from technology and science. Simply because science and its products have been so dominant in the last several generations, may not mean they will continue as the norm. Issues of religion may become the norm and science may be despised, particularly when future generations look back at the environmental destruction, such that a new moral imperative could well become the driving force behind the development of humankind.

Thus the ultimate conclusion of this thesis is that we need an open exchange of views that attempts understanding and analysis while not being tied to particular structures nor particular rules. Acceptance of ideas can only occur after a thorough understanding of methodology and method.

Science (whatever it may be, but certainly that which we think, or consider, to be of the natural sciences) has been dominant in Western philosophy and has served as a dominant paradigm for accounting research since the early 1960's. The issue for accountants in the future must be to use the scientific approach for the benefits that are clearly available from it, while at the same time recognising that other approaches are also appropriate and the knowledge so derived equally legitimate. To privilege one approach over another is to lead a life of blinkered myopia, whether it be phenomenology or positivism. To open up the gamut of alternative approaches to knowledge and understanding, and to open up the accounting environment to a more free and empathic debate concerning understand-

ing and knowledge must be the call for the future of our discipline.

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