



# Postpositivism and Accounting Research : A (Personal) Primer on Critical Realism

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## Abstract

This paper presents an overview and primer on the postpositivist philosophy of critical realism. The examination of this research paradigm commences with the identification of the underlying motivations that prompted a personal exploration of critical realism. A brief review of ontology, epistemology and methodology and the research philosophies and methods popularly applied in accounting is then provided. The meta-theoretical basis of critical realism and the ontological and epistemological assumptions that go towards establishing the 'truth' and validity criteria underpinning this paradigm are detailed, and the relevance and potential applications of critical realism to accounting research are also discussed. The purpose of this discussion is to make a call to diversify the approaches to accounting research, and – specifically – to assist researchers to realise the potential for postpositivist multiple method research designs in accounting. This is aided through an illustration that functions to highlight how and why this approach was applied in a real-world accounting research study.

**Keywords:** Accounting research; Research paradigms; Postpositivism; Critical realism.

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## 1. Introduction

In the 1990s, I worked on my doctorate researching the role of costing information in the outsourcing decision-making of managers in Australian public sector organisations. A highly topical issue at the time (see Kloot & Martin 2007; Bisman 2008), many of the then extant, prior research studies had been almost exclusively formulated as quantitative hypothesis testing exercises, applying inferential statistics to derive explanations of limited sets of factors influencing the cost outcomes (i.e. cost savings) achieved from outsourcing by public sector entities. Another body of work was also developing at this time which presented essentially narrative critiques of public sector outsourcing. From a personal standpoint, I was sceptical about many of the claimed benefits and outcomes of outsourcing and unconvinced by the quantitative research results that generally lauded the practice and found substantial cost savings were achieved. I was also dissatisfied that much critique of the practice was not informed by empirical research (for similar criticisms of accounting research in the context of Australian public sector reform see Broadbent & Guthrie 1992; 2008, p154; and Potter 1999, p46).

My personal viewpoint or world view (which had been informed by the issues and exceptions identified in the outsourcing literature available at the time), was one of scepticism, and so the research philosophy that matched with my own world view and perceptions (and that I could appropriately apply to study the outsourcing phenomenon in practice), was critical realism. Critical realism was an approach that, until the time of my study, did not appear to have been explicitly used in any existing accounting research studies. To apply this paradigm and its concomitant mixed and multiple methods approach, I needed to come to terms with its philosophical grounding and episteme, and understand how it worked, both in itself and in contrast to other research paradigms.

The journey to developing my own understanding of research philosophies, in general, and critical realism in particular, is the subject of this paper. Given that this journey took place around 15 years ago, this paper remains largely a product of its own time, place, space and context. The first draft of the work (Bisman 2001) was presented at the Accounting Association of Australia and New Zealand Annual Conference (Bisman 2002), with an example of the practical application of critical realism as a research paradigm for accounting appearing in a follow-up conference paper (Bisman 2003). Since that time, I have retained a keen interest in developments in critical realist research, although I had not thought to formally publish on the topic until invited to do so by the Editors of the *Australasian Accounting Business and Finance Journal*. However, since I first worked on this paper, other scholars have begun to discuss the features of critical realism in accounting research scenarios (such as Modell 2009, 2010; Lukka & Modell 2010). A growing number of researchers are also applying the paradigm in undertaking studies of accounting-related phenomena (see Burrowes, Kastantin & Novicevic 2004; Brown & Brignall 2007; Alawattage & Wickramasinghe 2008; Forsberg 2010), while others have added critical realism to the discourse on inclusive approaches to research in the discipline (for examples see Sikka & Willmott 2005; Ahrens 2008; Ahrens et al. 2008; Sikka, Filling & Liew 2009).

## 2. Research Philosophy and Research Methods

For several decades, theory construction and verification in accounting has been dominated by so-called 'mainstream' research conducted within the positivist paradigm. However, increasing numbers of accounting researchers are adopting interpretive paradigms, situated within both critical theory and constructivist philosophies, utilising naturalistic and qualitative methods supported by subjectivist epistemologies. By way of contrast, an

alternative approach, and one that has been largely lacking in accounting research activities until very recently, is that of postpositivism. The following discussion serves to emplace the postpositivist paradigm of critical realism within the broader dialogue on research philosophies.

A useful starting point in examining research philosophies is the consideration of research questions. It is a fundamental axiom of 'good' research that the methods chosen for use in a study should be driven by, and appropriate to, the research question/s (Abernethy et al. 1999; Merchant & Simons 1986). However, specific research questions and the research method/s used in answering those questions presume a particular methodological perspective. Methodology, in turn, reflects an underlying philosophy comprising an ontological view and associated epistemological assumptions. Thus, the most fundamental consideration in posing and answering research questions is the researcher's philosophical or meta-theoretical position.

Ontological assumptions affect the way a researcher views the world and what they consider to be 'real'. Deriving from ontology is epistemology, which concerns the theory of knowledge, its nature and limits (Blackburn 1996), and how people acquire and accept knowledge about the world. Thus researchers' ontological viewpoints shape their epistemological beliefs in terms of how knowing and understanding reality can be developed, and of the relationships between the researcher and that which is researched. Broadly speaking, the traditional opposing viewpoints on the nature of reality can be characterised as either materialistic or idealistic. Within metaphysics, the materialistic view suggests that reality is objective and concrete; that is, reality is material. The materialistic world view:

*is often referred to as the positivist or mechanistic view which stipulates that the scientific method of the physical and natural sciences is equally applicable to the social sciences and the study of human behaviour (Bright 1991, p24).*

Positivism is a highly objectivist view of a common, single reality. Positivists hold that anything that can be perceived through the senses is real (Sarantakos 2005) and so reality is an externality which exists independently of human thought and perception. The positivist form of realism is referred to as naive realism (Guba & Lincoln 1998) and rests on the assumption that the external world can be accurately described and causally explained. From a methodological perspective, positivist requirements for universal principles and generalisability imply the use of quantitative methodology, and the precision and usefulness of theories derived in this manner consequently are judged by their capacity to explain and/or predict phenomena. However, instrumentalism, a sub-set of the positivist view (see Friedman 1953), regards predictive ability rather than explanatory power to be paramount. In its purest form, positivism suggests that human behaviours can be reduced to the state of generalised laws in which the individual is not of significance (nomothetic). Such research is scientific, structured, has a prior theoretical base, seeks to establish the nature of relationships and causes and effects, and employs empirical validation and statistical analyses to test and confirm theories.

By way of contrast to the positivist philosophy, idealism rejects the notion that human behaviours are deterministic. Rather, meanings of phenomena are contextual and historically and/or socially defined. From the idealistic vantage, reality is subjective, relativistic or self-referential, and non-material, and is therefore internally experienced, interpreted and constructed by the mind. Following this view, the appropriate way to study human behaviours is through approaches grounded in historical analysis, ethnography, critical and sociological theory and hermeneutics. Within this paradigm the individual is unique and

significant (idiographic). Consequently, this view suggests research is an interpretive act, usually approached naturalistically and via the adoption of a qualitative methodology.

Nevertheless, even within an overarching idealistic world view there are divergent positions. For example, constructivism suggests that there are multiple realities because reality is subjective and socially constructed (Berger & Luckman 1966). Within this paradigm, research is both humanistic and dialectic. Alternatively, the critical theory perspective, which is arguably more interactionist than idealist, suggests that historical and other mechanisms shape reality and that researchers are transformative intellectuals with the ability to change the social order (Guba & Lincoln 1994; Perry, Alizadeh & Riege 1997). Critical theorists accept a modified form of realism, wherein reality is created by the powerful who have obfuscated or obscured reality and manipulated the unemancipated into believing an illusory reality. Within critical theorists' work, the mathematical and statistical modelling favoured by positivists is excluded, quantitative methods are used to a lesser extent, and instead there is a marked emphasis on detailed historical explanations (Chua 1986a, p620). Some authors argue that critical perspectives are not embraced within interpretivism (see Covalleski, Dirsmith & Samuel 1996), and yet others (see Ticehurst & Veal 1999, p20) suggest that the differences between critical perspectives and constructivism rely merely on "shades of meaning" and that there is simply a singular "critical interpretive" paradigm. Interpretive research (whether framed within critical theory or constructivist perspectives), is usually context specific, either utilises social or political theory as a lens or employs grounded theory, and aims to provide narrative and interpretive descriptions of events (Wiersma 1995; Holmes, Hodgson & Nevell 1991).

### 3. Research Philosophy in Accounting

Despite the growth in interpretivist approaches, accounting and finance research has been, and continues to be, dominated by objectivist ontology. For example, surveys of leading accounting journals reveal the majority of articles have a foundation derived from economic and positive accounting theory (see Bonner et al. 2006; Gaffikin 2007; Parker 2007). Such positivist research literature presupposes that the scientific approach is appropriate to the discovery, explanation and prediction of accounting phenomena. It is founded upon the ontological view that the 'reality' of accounting can be discovered by the use of the senses or through sensory experience (empiricism), that accounting is objective, and that accounting hypotheses can be statistically tested to produce generalisable findings.

Relatively more recently accounting researchers have explored the field from the idealistic and naturalistic standpoints. There is a burgeoning area of the literature<sup>1</sup> represented by accounting historians and radical theorists (see Chua 1986a) who recommend and utilise various critical and constructivist approaches (see Laughlin 1987; Dillard 1991; Quattrone 2000). These variants of accounting research are generally not concerned with explanation, but rather with interpretation, and rest with the notions that accounting information is subjective and socially or politically constructed (see Hines 1991, 1992; Chua 1986b).

This paradigm debate in accounting was fuelled by arguments over the nature of reality and empiricism, together with opposing views about the means for discovering reality, and was exacerbated by unstated ontological, epistemological and methodological assumptions. The accounting and finance disciplines had become, and remain to some extent:

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<sup>1</sup> See, for example, journals such as *Accounting History*; *Accounting Historians Journal*; *Accounting, Organizations and Society*; *Accounting, Auditing and Accountability Journal*; and *Critical Perspectives on Accounting*.

*a battleground between researchers with different, and often unstated methodological assumptions about the nature of reality, the role of theory and the significance of empirical experimentation (Ryan, Scapens & Theobald 1992, p3).*

This battleground is composed of those adopting a materialist/positivist philosophy versus those adopting an idealist/interpretivist philosophy. In many disciplines, such debates are labelled ‘paradigm wars’. The debate is both ontological and epistemological. Differing views about the nature of reality (ontology) affect the relationship between the researcher and reality and whether reality, within the domain of knowledge, is deemed to be discoverable from an objectivist or subjectivist standpoint (epistemology). Both ontology and epistemology influence methodological choice. The debate serves to emphasise not only the need to match research methods to research questions, and to report those methods, but also the need for the underlying research philosophy to be made explicit in the written account of the research. Because many proponents on either side of the debate are convinced of the appropriateness of their positions, much of the accounting literature has become divisive and difficult to synthesise (see Ahrens 2008). A technique (or more broadly speaking, a paradigm) that could draw on the strengths of, and reconcile to some measure both schools of thought, could contribute a great deal towards harmonising a schismatic research effort. A similar call, although with a completely different suggested solution,<sup>2</sup> was made by Laughlin (1995) in his advocacy of ‘middle-range thinking’ in empirical research in accounting.

Both positivist and interpretivist approaches are valuable in accounting research, although each has weaknesses. While positive research might provide particular forms of explanations of accounting phenomena, there are valid interpretivist arguments to suggest that a multiplicity of other structures, variables, behaviours or influences are also important. There is a tendency in positive research to discount contrary research findings as anomalous, rather than to search for contextual reasons to provide a better understanding of actions and events that do not fit the theories or models applied. An idealistic or interpretive stance also offers the potential to answer many accounting-related research questions, and yet the importance afforded to a particular context in this type of research often leads to the incapacity to make generalisations. Whether desirable or not, generalisations are often necessary for shaping or improving practice and policy, which cannot practically be customised to suit each and every individual context.

Consequently, studies examining human behaviours in connection with, or as a reaction to, accounting information could well benefit from applying multiple or mixed research methods. While the use of multiple methods in accounting and business research is certainly not a new idea (see Birnberg, Shields & Young 1990; Easterby-Smith, Thorpe & Lowe 1991), the thrust of the current paper goes a step further in arguing, as a necessity, the concomitant adoption of a research paradigm that supports and reflects a combined methodological approach. Such an approach would need to recognise the validity of both quantitative and qualitative methodologies, retain elements of scientific rigour, and yet acknowledge the value of richness and context, as well as the importance of generalisability. A research paradigm providing these features is critical realism, and there was emergent support for the use of this paradigm in other business-related fields, such as economics and marketing, beginning in the 1990s (see for example, Hunt 1990, 1992; Lawson 1996; Healy & Perry 1998, 2000; Fleetwood 1999). Critical realism has also been advocated in other

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<sup>2</sup> While Laughlin’s (1995) solution was to advocate the use of a German critical theory approach, his belief that there can only ever be ‘skeletal’ theories concerning the social phenomena connected with accounting is somewhat reminiscent of the critical realist position of attempting to unearth tendencies and generative mechanisms.

disciplines as means for overcoming the “deadlock between scientific realism and antirealism” (Sanchez 1992, p157).

#### 4. Basis of Critical Realism

The philosophy of critical realism can be said to straddle two independent, but not mutually exclusive<sup>3</sup> schools of thought. The first is American critical realism (see Preston 1965), a relatively short-lived movement of the early twentieth century, and the second is a contemporary and arguably more critical<sup>4</sup> philosophical movement (also dubbed critical realism), and represented principally by the works of Bhaskar (1978, 1979, 1989; see also Collier 1994).

Despite Bhaskar’s evolving stance on the emancipatory nature of critical realism and the commonalities of contemporary critical realism with critical theory perspectives, critical realism is still scientifically flavoured (Bhaskar 1978) and arguably less radical. Modern critical realism is a school of thought in its own right,<sup>5</sup> distinct from naive realism and from idealistic, radical and constructivist (Tholey 1989) conceptions. Critical realism may be viewed instead as a specific form of scientific realism in which the objects of science are distinct from the practice of science (Brown 1999) or, as Bhaskar (1975, p183) puts it:

*I have argued that the concept of natural necessity is the concept of a real generative mechanism at work, a concept which is applicable to the world quite independently of men.*

Situated under the umbrella of postpositivism, and offering a modified objectivist view, critical realism is:

*Any doctrine reconciling the real, independent, objective nature of the world (realism) with a due appreciation of the mind-dependence of the sensory experiences whereby we know about it (hence critical). In critical, as opposed to naive, realism the mind knows the world only by means of a medium or vehicle of perception and thought; the problem is to give an account of the relationship between the medium and what it represents (Blackburn 1996, p88).*

Critical realism is both scientific and transcendental, seeing the world as ‘structured, differentiated and changing’ and holding that:

*we will only be able to understand ... the social world if we identify the structures at work that generate those events or discourses ... Social phenomena (like most natural phenomena) are the product of a plurality of structures (Bhaskar 1989, p2).*

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<sup>3</sup> The similarities between old and new critical realist schools are canvassed in Verstegen (2000).

<sup>4</sup> Contemporary Bhaskarian critical realists appear to fall into two broad categories: critical realists, and the more latterly emergent dialectical critical realists (see Brown 1999). The latter dialectical group probably shares more in common with critical theorists than the former. The work of many of Bhaskar’s followers is somewhat indistinguishable from those of critical theorists in terms of the use of Marx and Engel’s work, and in studies encompassing issues related to race, gender and culture.

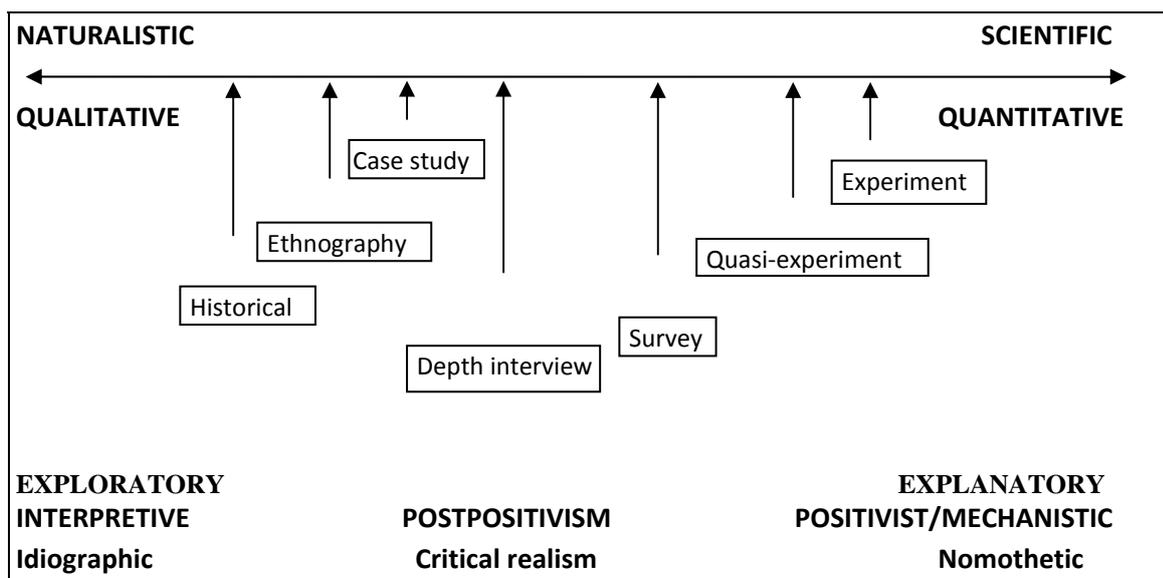
<sup>5</sup> See the *Journal of Critical Realism*.

While positivism concerns a single, concrete reality, and constructivist interpretivism embraces multiple realities, critical realism concerns multiple perceptions about a single, mind-independent reality (Healy & Perry 2000). Critical realists presume that a reality exists, but that it cannot be fully or perfectly apprehended (Guba 1990). It is recognised that perceptions have a certain degree of plasticity (Churchland 1979) and that there are differences between reality and people’s perceptions of reality. The concept of reality embodied within critical realism is thus one extending beyond the self or consciousness, but which is not wholly discoverable or knowable. However, unlike critical theory or particular sociological perspectives on the nature of reality (such as Giddens’ (1984) structuration theory), critical realism is not dependent upon detailed historical explanations or constrained by a particular theoretical frame.

Both constructivists and critical realists reject logical positivism (Firestone 1990) because of its causal reductionism, and both schools of thought reflect disillusionment with the objectivity and truth positions espoused by positivists. While somewhat akin to positivism by embodying an intransitive ontology, the epistemology of critical realism is instead transitive. Critical realism concerns generative mechanisms, which represent tendencies (Bhaskar 1978). The aim of critical realist research is thus the “identification and verification of underlying generative mechanisms” or structures that give rise to actions and events that can be experienced in the empirical domain (Wollin 1996, p1). Generalisations derived from critical realist research thus concern a probabilistic truth, rather than an absolute truth.

Within a critical realism framework, both qualitative and quantitative methodologies are deemed appropriate (Healy & Perry 2000) for researching the underlying mechanisms that drive actions and events. Naturalistic methods, such as case studies and unstructured or semi-structured depth interviews are acceptable and relevant within the paradigm, as are descriptive statistics and statistical analyses, such as those derived from structural equation modelling and other techniques (Perry, Alizadeh & Riege 1997).

Figure 1  
Characteristics of the Qualitative – Quantitative Research Continuum



Source: Adapted from Bright (1991, p25) and Wiersma (1995, p14), with the addition of critical realism and various descriptors for other forms of research.

Conventionally, qualitative and quantitative methodologies are placed into the framework of a methodological dichotomy, and while it is convenient to do so (see Hammersley 1992) it ignores the possibility that the distinctions are best reflected along a continuum. Figure 1 (see previous page) illustrates that critical realism is a ‘middle-ground’ approach in terms of the methodology, the roles of the individual and of context, and the modified objectivist epistemological position.

Critical realism’s combination of quantitative and qualitative methodologies complements the provision of an elaborated view of issues and phenomena studied, and establishes the validity of findings. Qualitative, naturalistic approaches provide richness, depth, density and the contextual embedding of data. Quantitative approaches, including those utilising certain forms of statistical analysis, allow for the assessment of the capacity for the broader applicability of observed patterns in data. Critical realist research may be initially qualitative and inductive, enabling issues, propositions and models to be developed, clarified and modified, then followed by the hypothetico-deductive approach<sup>6</sup> (most commonly used in quantitative accounting research), to unearth knowledge concerning broader mechanisms and tendencies.

Other than the consideration of the fundamental philosophy connected with the critical realist position, adoption of the paradigm will also influence the criteria mooted as useful for establishing the truth and validity of research. Just as the philosophy of critical realism is different to positivism and the constructivist form of interpretivism, so too are the criteria for judging the validity and truth-value of critical realist research.

## 5. ‘Truth’ and Critical Realism

At the root of Bhaskarian critical realism is the concept of alethic truth (Groff 2000; Bhaskar 1993), which concerns the discovery of the reason for things (Bhaskar 1993) – that is, of the underlying generative mechanisms which stratify and differentiate the world. As well as this alethic concept, truth within critical realism is also derived from notions of trust and warrantable assertiveness, and is referential. These notions are consistent with the broader consensus and coherence theories of truth.

Consensus theory asserts that an observation sentence is true when there is general group agreement, while coherence theory asserts that an observation sentence is warrantable only if it is provable within a theory – truth is thus coherence within a system (Hesse 1980, cited in Lincoln & Guba 1985, p91). As claimed by its chief proponent, “critical realism embraces a coherent account of the nature of nature, society, science, human agency and philosophy” (Bhaskar 1989, p191). By way of contrast, positivism is based on the correspondence theory of truth, asserting that if an observation sentence corresponds to or is isomorphic with ‘reality’, then it is true.

Under critical realism, where alternative theories exist to explain an action or event, then validity and theory acceptance are established by choosing the alternative that “allows us to construct a consistent and coherent account of our experience” (Churchland 1979, p87). Ryan, Scapens & Theobald (1992, pp16-18) comprehensively summarise the situation:

*The most tenable position is that the statements we make about observations have coherence with reality if the actions or beliefs produced within independent individuals as a result of those statements are congruent with one another. This coherence/consensus theory of truth is particularly attractive as it contains the root of a very important principle in experimental science, namely that*

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<sup>6</sup> See Chua (1986a, 1986b).

*observational results depend for their veracity on their replicability ... the task of a good empirical scientist ... is to collect observational data and report on observational conditions in as reliable a way as technology will permit ... and to ensure that the observational conditions are accurately reported so that other scientists can replicate the results ... the position we have outlined is a very modest form of realism and it relies upon two concepts of coherence and consensus.*

Accounting research conducted within a critical realist paradigm thus has its basis in replicability, coherence and consensus, since results obtained from applying both qualitative and quantitative methodologies can be judged on these bases. An element of replication, to demonstrate reliability, can be applied in almost any form of research study (Bordens & Abbott 1999). Further, the ability to use multiple methods within a critical realist world view can also provide the basis for replication on both theoretical and practical levels. Results produced in one stage of the research are subjected to further scrutiny in successive stages of the research, as well as being compared to theoretical foundations.

Coherence and consensus conditions will be emergent dimensions of research, established by the congruity and concord of results and findings within and across stages and methods of the research design. Research questions can be answered by discovering and elaborating on themes arising from trends and commonalities in the data and results. Thus, coherence and consensus are established through the identification, observation, and documentation of harmonious patterns and themes, and the consistent correspondence, or lack of correspondence, of these themes with underlying theories. These approaches differ from the more constrained and less detailed statistical generalisations produced when positivist approaches are applied to the analysis of data. The approaches also differ from those employed when using more interpretive methods by which data must be rendered meaningful by reference to a sociological theory or an ideology.

While replicability, coherence and consensus are the main criteria for judging critical realist research, there are validity and generalisability issues concerning each of the specific research methods that can be used within the critical realist framework.

## 6. Validity of Critical Realist Research

Positivists stress that reliability, validity, and generalisability form the cornerstone for judging the adequacy and quality of research (Sarantakos 1993; Abernethy et al. 1999; Bordens & Abbott 1999). In this type of research, reliability is usually assessed in terms of the stability of results generated through the application of some measurement instrument, such as a survey questionnaire. Validity includes the ability to test hypotheses adequately (internal validity) and the ability to extend the results obtained to wider settings (external validity).

In qualitative research settings, particularly those founded on a subjectivist epistemology, reliability and validity retain importance, although these concepts are interpreted somewhat differently. Given the absence of the use of inferential statistics in qualitative settings, replicability becomes a key measure of reliability (Bordens & Abbott 1999). Generalisability, in the statistical sense, is not normally a concern of qualitative research, although theoretical generalisation is usually important. Qualitative research therefore tends to use what might be regarded as 'substitute' validity and reliability criteria, including trustworthiness, credibility, transferability, dependability and confirmability (Lincoln & Guba 1985, p43; US General Accounting Office 1990, cited in Yin 1994, p32).

While it has been suggested that internal and external validity are important in critical realist research (Denzin & Lincoln 1998), there are arguments that the situation is somewhat different. Because realists criticise the basic tenets of positivism, “these criticisms pose a major problem for issues such as how to judge the validity of the research and how to decide when to accept one theory in place of another” (Smith 1990, p170). There are various means for establishing the validity of critical realist research and the common criteria appear to include criticality and critical multiplism (Bhaskar 1989; Guba 1990), trustworthiness and analytical generalisation (Healy & Perry 2000).

### *Criticality and Critical Multiplism*

Critical realism is critical in the sense that it recognises that the researcher, being distinct from what is researched, must apply criteria to assess theory and to acknowledge that the data collected is value-laden or theory-laden. This is reflective of the value-conscious position of critical realism. Critical realism is concerned not only with achieving a corresponding position with the world, but also participating in criticising and changing it (Gerhart 1988; Collier 1994). However, the notion of criticality embodied within critical realism is often more closely aligned with the falsification of presumed or believed ‘knowledge’ and theory, rather than with the more overt emancipatory emphasis of critical theory research.

Critical multiplism is concerned with the reduction of bias in research through the recognition that “any single research method or procedure is equally limited” (Figueredo 1993, p3), and is akin to triangulation in its most comprehensive sense. The critical realist paradigm explicitly “relies on multiple methods as a way of capturing as much of reality as possible” (Denzin & Lincoln 1998, p9) and therefore is the means for unearthing the generative mechanisms which underlie perceived reality. Underpinning the idea of critical multiplism is the contention that:

*no one approach or measure is perfect. As a result, both triangulation and critical multiplism seek to eliminate inherent bias in the research method chosen. However, critical multiplism goes further in that it encourages the exhaustive study of phenomena from as many perspectives as possible (Letourneau & Allen 1999, p625).*

There are a number of approaches to triangulation and thus to engendering critical multiplism in research. In essence, all approaches to triangulation are aimed at providing confirmatory, corroborative and cross-validating checks on data collection, analysis and interpretation. A range of approaches to triangulation include:

- between methods triangulation (Denzin 1978) – involving the use of more than one method in one study (also known as within-study multiple methods)
- within method triangulation (Denzin 1978 – such as using multiple sources of data within one method)
- theory triangulation (Berry, Laughton & Otley. 1991) – using multiple theoretical perspectives or frameworks to underpin a single study
- researcher-subject triangulation (Cohen & Manion 1989) – corroborating the researcher’s results, interpretations or findings with the research subject
- investigator triangulation (Duffy 1987) – using more than one investigator in a single study (also known as researcher convergence)
- between studies triangulation (Birnberg, Shields & Young 1990) – the ultimate form of critical multiplism, where an understanding of phenomena is built up by

one or more researchers utilising different methods in different and/or successive studies of the same issue.

Within a critical realist ontology and epistemology, triangulation and critical multiplism are usually reflected in the utilisation of multiple data sources and multiple methods, and in particular the capacity to use both quantitative and qualitative methods. Within and between methods triangulation are thus the most obvious features of critical realist research and various combinations (such as different qualitative methods or both qualitative and quantitative methods) can be used to probe a research question. However, all forms of triangulation add to the breadth and depth of critical multiplism.

Theory triangulation (for example, referring to the use of a variety of theoretical perspectives within a research project), can provide a more holistic analysis of data and a greater capacity to recognise alternative interpretations of the same data. Because critical realism embodies a modified objectivist epistemology, it can accommodate alternative theoretical perspectives on research issues and thereby promote efforts directed toward theory triangulation.

Both researcher-subject triangulation and investigator triangulation are aimed at reducing researcher bias. Researcher-subject triangulation is possible in respect to the qualitative component/s of a critical realist research project, while opportunities for investigator triangulation are advanced within a critical realism framework because a combined qualitative/quantitative methodology is favourable to collaborative and team-based research.

Between studies triangulation usually refers to the process of comparing the results and conclusions of a current research study with those of similar, prior studies. Since the meta-theoretical tenets of critical realism occupy a middle ground, relevant findings from both prior positive research and interpretive research can be used for comparison purposes. The opportunity to triangulate with research results derived using alternative ontologies and epistemologies is an obvious advantage of the critical realist paradigm, and helps to further current research efforts and future research agendas. This type of triangulation can more efficiently and effectively advance knowledge in rapidly changing disciplines such as accounting (Birnberg, Shields & Young 1990, p62).

Triangulation (whichever kind), helps to reduce bias, and thus produces a chain of evidence to form a backdrop to relations observed between variables, providing greater assurance that threats to the validity of analysis have been counteracted, and allowing greater confidence to be placed upon research results (Judd, Smith & Kidder 1991; Brownell 1995).

### *Trustworthiness and Auditability*

In addition to criticality and critical multiplism, trustworthiness is a further means for establishing or improving the validity of research conducted within a critical realist framework. The concept of trustworthiness in realist research is grounded in auditability (Lincoln & Guba 1985). Trustworthiness is therefore judged by the extent to which the research can be audited by virtue of the databases maintained and the use of quotations of research subjects and participants in written research reports (Healy & Perry 2000). As Yin (1994, p50) asserts in the case study research context, “the exemplary case study is one that judiciously and effectively presents the most compelling evidence, so that a reader can make an independent judgment regarding the merits of the analysis”.

For both qualitative and quantitative components of research, thorough documentation of data collection and analysis methods promotes both reliability and replicability. Definitions of constructs and variables, data collection plans and protocols, and recording and

coding schema can be developed prior to entering the field in order to systematise observations, interviews and document review. Documentation also needs to be maintained following data collection in order to fully enable auditability, and thereby promote validity and reliability. Auditability is one of the hallmarks of science and promotes rigour in both data collection and analysis. It also provides for replication.

### *Analytical Generalisation and Replication*

While auditability can enable external replication of research, the criterion of analytical generalisation facilitates within-study replication. Analytical generalisation involves the generalisation of a set of results from a case or cases to a broader theory (Yin 1994, p36). In other words, theory can be applied to a case in order to explain the specific case, rather than to produce universal generalisations (Ryan, Scapens & Theobald 1992). This analytical generalisation is often iterative or replicated, where an initial comparison between results and theory is made, followed by further cases; the results of which are compared with theory, the theory modified, and so on (Wollin 1996).

Apart from the verification of the results of case studies through a process of replication, several other approaches can be adopted to improve replicability, coherence and consensus within a critical realism framework. Convergent interviewing, another of the research methods popular within the critical realist paradigm (Healy & Perry 2000), is an iterative process designed to improve convergent validity and enable replication within a study. While qualitative research is often exploratory, it is also explanatory to the extent that theory development and model building require an understanding and explication of relationships. The application of quantitative methods in later components of a research program provides a further measure of rigour in theory building, testing and analytical generalisation derived from case and other qualitative approaches (Wollin 1996). The inclusion of quantitative methods also adds to convergence and consensus positions established through qualitative methods, thus reinforcing reliability and replicability.

## 7. Relevance of Critical Realism to Research in Accounting

The prior sections of this paper have provided the background (and some justifications) for the adoption of a combined and complementary methodological choice and a critical realist paradigm within the broad context of accounting research. Critical realism is, therefore, advocated as an alternative and conciliatory research paradigm for accounting, one which has been largely overlooked or ignored, and yet one which is eminently suitable for addressing a broad range of accounting research questions. The specific nature of accounting and accounting phenomena provide a legitimate rationale for advocating critical realism in a range of research settings.

Accounting is a human artefact, and decision-making is inextricably bound to facets of human cognition. As one of the key Australian accounting theory textbooks of the time made clear “the study of accounting is, therefore, the study of some specific examples of human behaviour” (Henderson & Peirson 1992, p27). To some extent, positivists recognise the behavioural import of accounting and accounting information, with a prime example being the examination of lobbying and political behaviour in financial accounting standard setting (see Watts & Zimmerman 1978, 1979). Interpretive researchers have also been concerned with behavioural issues, such as accounting’s role in the construction of power relationships, and notions of legitimacy and norms (for contemporaneous examples see Parker 1981; Cooper & Hopper 1987; Hopwood 1987; Previts, Parker & Coffman 1990; Chua & Degeling 1993; Merino 1993).

A critical realist stance offers the potential to investigate not only the economic consequences of accounting, but also the perceptions and perceptual biases of accountants, managers, decision-makers and other stakeholders in their use of, and reactions to, accounting information. Boland and Pondy (1983) suggest that such a melding of the natural and the rational is an appropriate means for studying accounting in organisations. The blend of qualitative and quantitative research methods that can be applied in studying accounting through the lens of critical realism also marries well with the mix of economic and non-economic theoretical foundations of many accounting research questions. This paper suggests that at least two drivers are associated with the adoption of a paradigm for research in accounting: (1) the nature of the main and support research questions, including the relative importance of context in answering those questions; and (2) the extant theoretical literature in the topic area.

### *Nature and Context of Accounting Research Questions*

At the most fundamental level, choosing an ontological and epistemological paradigm and associated methodology for an accounting study needs to be driven by the objective of finding the most appropriate way to answer the research question. As demonstrated in the earlier discussion of human behaviour and accounting, as social scientists accounting researchers deal with intangible and artefactual phenomena. The cost data and financial information derived from accounting systems are human-made and have no natural existence. Thus accounting information is not 'objective' in a physical or positivist economic sense. Economists define true costs as opportunity costs, while the costs derived from accounting systems are generally subjective costs (Chiles & McMackin 1996), and only in general equilibrium will costs measured by accounting methods equal objective costs as defined by economists (Vaughn 1980). The provision of certain types of accounting information for particular decision scenarios is usually based on the principle of relevance, where the accuracy of an accounting cost or value is a function of the relevance of that information to the decision being made (Boer 1994). Thus, accounting definitions of costs are conditional truths, rather than absolute truths (Horngren 1975). The conditional truth of accounting information supports the proposition that alethic truth and coherence and consensus theories of truth (as they are applied to critical realist research), are apposite in an accounting context.

Further, since accounting information is designed to facilitate decision-making, any examination of accounting phenomena requires an understanding of decision processes. Acquiring this understanding entails the consideration of how individuals and groups of individuals perceive uncertain future realities, and how social relations and human behaviour impact upon the process and outcomes of decision-making. Thus, accounting research questions are not rooted in a purely objective reality. Consequently, most research questions in our discipline are not answerable independently of the human behaviour and perceptions within which they are embedded. As part of both decision support and control systems, accounting thus has both "behavioural and political dimensions" (Scapens 1991, p221). It may therefore be inappropriate to adopt a stance that suggests that accounting is produced or used apolitically, or that it has no behavioural effects or consequences. These dimensions suggest that naturalistic and qualitative approaches to the collection and analysis of accounting research data are required (perhaps as a first step in the research process), in order to describe and gain some understanding of the complexities of producing and using that information. Once the contextual nature of decision-making, decision-makers and decisions are mapped in a specific setting, the generative structures unearthed can be charted and investigated more broadly by applying quantitative methods. Critical realism allows for, and

in fact recognises, the importance of context in leading to the exposure of the broader generative mechanisms that drive observable actions and events.

Questions concerning accounting and decision-making are often what Yin (1994) describes as complex and “fuzzy boundary” questions, and these questions are ideally suitable for critical realist research. In such settings, critical realist research attempts to develop a family of answers which embrace multiple contexts and different participants (Pawson & Tilley 1997), recognising that “social phenomena by their nature are fragile, so that causal impacts are not fixed but contingent upon their environment” (Healy & Perry 2000, p12). There is thus an “ontological appropriateness” (Healy & Perry 2000) of critical realism, given the nature and context of accounting research questions.

A range of relatively recent accounting research studies, which explicitly utilised critical realism (as noted in the introductory section of this paper), have canvassed a variety of issues ranging from regulatory environments and disclosure (see Burrowes, Kastantin & Novicevic 2004) to the interface of accounting standards with society and culture (see Forsberg 2010), accounting and political hegemony (see Alawattage & Wickramasinghe 2008), and the role of accounting in university management (see Brown & Brignall 2007). These examples suggest that the paradigm can be applied in manifold settings and topic areas and can find a fit with investigations framed within different theoretical scaffolds.

### *Theoretical Context*

In discussing business research, Rumelt, Schendel & Teece (1991, p27) contended that:

*where organizational relationships turn on exchange and on individual incentives, various economic approaches will have much to say. Where the coordination and accumulation of knowledge is key, and where patterns of belief and attitude are important, other disciplines will have more to say.*

Accountants predominantly borrow the theoretical underpinnings of their research studies from other disciplines (Brownell 1995), and the utilisation of particular economic or other theoretical frameworks in accounting research often implies particular means or methods for conducting that research. For example, research based on agency theory and other economic models, such as contracting cost theory, is generally conducted using quantitative techniques, including mathematical modelling and experiments, since a positivist philosophy is presupposed (Ryan, Scapens & Theobald 1992). However, proponents of agency theory usually point to its probabilistic nature (Watts & Zimmerman 1986, 1990). This probabilistic nature is perhaps better accounted for within critical realism where research findings are considered indicative of tendencies rather than causal absolutes.

Since critical realism is theory neutral, virtually any relevant theories, regardless of whether or not they are conventionally matched with a particular paradigmatic perspective, can be used to frame a critical realist research study. For example, there is no reason why critical realism cannot be used as a paradigm for answering questions that derive from an essentially positivist standpoint. The ability, within a critical realist framework, to apply both quantitative and qualitative methodologies to agency and related research questions also offers the potential to counteract some of the chief criticisms and most vexatious problems of such positive theories. Refining restrictive assumptions and addressing the so-called ‘black box’ issues of agency and other positive theories (Baiman 1982, 1990; Nilikant & Rao 1994; Ghoshal & Moran 1996) might best be achieved through a critical realist combination of qualitative and quantitative methods, particularly given that the case for “realism and balance” in such research has already been advanced (see Moran & Ghoshal 1996).

Conversely, where there is no pre-existing theory or where the objective of research is to develop grounded theory, then naturalistic and interpretive research is usually preferred. However, the lack of a prior theoretical base in which to root a research question does not preclude the use of critical realism. The complex and contextual issues usually tackled in naturalistic and qualitative inquiry, as part of a process of identification, exploration and model building, can also be addressed within a critical realist paradigm. Often the issues discovered and explored are worthy of extension to other settings and contexts in the search for more broadly based associations and relationships, and so critical realism allows the use of a combination of qualitative and quantitative methodologies. Using such multiple methodologies and methods is likely to provide a richer understanding of research issues and questions than could be achieved by utilising a single methodology and has a greater potential to establish a convergent and consensual position.

## 8. Illustrative example

As detailed in the first section of this paper, in the 1990s an examination of the literature on public sector outsourcing revealed to me a lacuna regarding the source and accuracy of claimed cost savings from outsourcing and the lack of research on the use of costs and costing information in the practice of outsourcing decision-making. It also led me to contend that costing for outsourcing decisions could not be examined without considering ‘the peculiarities and regulatory imperatives affecting public sector organisations’ (Bisman 1999, p5). Thus the major aim of my doctoral research was to explore and understand the interrelationships of multiple contextual and environmental influences on outsourcing decisions in Australian public sector organisations, and in particular to map the significance of costs within this framework.

Greve (2001), following Miller and Simmons’ (1998) Baudrillardian-based<sup>7</sup> typology, suggested that there were four different ways to study outsourcing. Ex-post, I was able to match each of these four interpretations with the research paradigm to which it implicitly refers (as shown below):

- Outsourcing is assumed to be a real event (positivism).
- Outsourcing should be approached sceptically; involving researchers critically examining claims made about its achievements (critical realism).
- The hidden political reality of outsourcing must be unmasked (critical theory).
- Outsourcing must be understood in a self-referential way (constructivism).

The aims and question set for my doctoral research, together with the underlying ontological and epistemological paradigm adopted, called for the use of qualitative methodology to explore relationships between variables in outsourcing decision-making, and the use of quantitative methodology to produce more broadly based conclusions useful to stakeholders in shaping or improving outsourcing practice and policy. Thus, a multi-methods approach was appropriate for addressing the research question, offering the potential to investigate the role of managers’ perceptions of costs in outsourcing decision-making and to examine the economic, political, social and other considerations inherent in public sector outsourcing.

Following the Boland and Pondy (1983) exhortation noted earlier – which outlined that a melding of the natural and the rational are appropriate means for studying accounting in organisations – the array of qualitative and quantitative methods used in this outsourcing

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<sup>7</sup> The typology is based on the writings of the postmodernist philosopher Jean Baudrillard (1994).

study also matched the variety of economic and other theoretical foundations<sup>8</sup> of the research. In undertaking the research, a series of complementary methods were applied in a structured sequence to explore, build, modify and ultimately test a model of the role of costs in outsourcing decision-making in Australian public sector organisations. This research design consisted of four components:

- i. *a content analysis of that subset of the literature (n = 66) which provided listings of advantages and disadvantages of outsourcing, conducted primarily to garner information on the nature of the objectives and variables affecting the outsourcing decision*
- ii. *a detailed case study of a single public sector organisation, constituting a multi-method research exercise in itself and involving data sourced through the techniques of oral histories (via individual interviews), focus group interviews, participant observation and site visits, and review of internal and publicly available documents*
- iii. *a series of individual depth interviews with managers from a further fifteen public sector organisations*
- iv. *a large-scale survey questionnaire administered to managers of a still broader range of public entities (n = 131 respondent organisations) and which included the collection of extensive qualitative data generated through rigorously pre-tested open-ended questions, as well as quantitative close-ended questions utilising scales.*

Fashioned in accord with the tenets of the critical realist philosophy, this use of multiple methods was a strategy, for “attack[ing] a research problem with an arsenal of methods that have non-overlapping weaknesses in addition to their complementary strengths” (Brewer & Hunter 1989, p17). A sceptical view on the topic and extant prior research, coupled with a detailed multi-method research strategy, explicitly addressed both the criticality and critical multiplism elements integral to the appropriate application of the critical realist philosophy.

## 9. Concluding remarks

In a seminal article on radical developments in accounting theory and research, Chua (1986a, p626) stated:

*This paper has sought to move accounting debate beyond the stalemate of “incommensurable” paradigms which cannot be rationally evaluated. It has argued that mainstream accounting thought is grounded in a common set of assumptions about knowledge and the empirical world which both enlighten and enslave. These assumptions offer certain insights but obscure others. By changing them, new insights may be gained which can potentially extend our knowledge of accounting.*

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<sup>8</sup> The research was guided by a multi-theoretical model which included insights drawn from agency theory, transaction cost economics, contingency theory, decision-making theory and political theory.

While Chua (1986a) argued the case for constructivist and critical perspectives as alternative world views to the positivist inclination of much accounting research of the time, the argument she makes equally supports the case for critical realism proffered in this paper. Critical realism, if not a means for overcoming the paradigmatic divide in accounting research, nevertheless offers opportunities for examining and re-examining accounting issues and questions from a different, largely ignored, and less orthodox perspective.

Critical realism is not advocated as a panacea for accounting research, and nor is it without its critics and weaknesses. Some suggest that critical realism is not critical enough (see Gerhart 1988; Denzin & Lincoln 2005, p13), that it lacks an adequate theory of signs and semiosis (Nelhaus 1998), and that it fails to provide an adequate account of percipient-object relationships (Oakes 1970). However, both positivist and interpretivist paradigms also possess inherent shortcomings. Rather, what is advocated in this paper is the recognition and application of critical realism as a relevant and useful alternative framework for exploring accounting research questions. It allows the matching of questions with methodology and methods (avoiding the polarisation of the research into the qualitative and quantitative), and yet maintains rigor and an empirical base while providing recognition of the idiographic and contextual nature of aspects of human behaviour and the role played by accounting and accounting information in society. Such an approach has the potential to inform and advance accounting research agendas with a view to providing an elaborated understanding of the economic, regulatory, social, and political effects and uses of accounting.

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