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Recovering the Ontological Foundations of the Grounded Theory Method

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Completed Research Paper

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Abstract

Researchers have identified several problems with the Grounded Theory Method, which include fundamental concerns about its ontological foundations and epistemological stance. Many IS researchers consider such issues unproblematic or are unaware of them. This situation is compounded by the fact it is employed selectively as part of positivist, post-positivist or interpretivist research approaches; indeed, some researchers argue that the method is paradigmatically neutral. Accordingly, there have been recent calls in reference disciplines for researchers to address the method's problematic ontological and epistemological grounding. The objective of this paper is, therefore, to help IS researchers understand better these issues. The paper draws on phenomenological hermeneutics to achieve this aim. This essay therefore makes a contribution to IS research through its constructive analysis of the Grounded Theory Method, by identifying the method's strengths and weaknesses, and by providing insights into how the latter can be strengthened in interpretivist studies using phenomenological hermeneutics.

Keywords: Phenomenological Hermeneutics, Grounded Theory, Circle of Understanding, Ontology

Introduction

Grounded Theory was first posited by Barney Glaser and Anselm Strauss in the *Discovery of grounded theory. Strategies for Qualitative Research* in 1967. In response to the growth of ethnographic studies in the social sciences, which were criticized as 'soft science' by sociologists of a positivist understanding (Blumer 1969), Glaser and Strauss (1967, p. 3) argued that Grounded Theory "in sociology is a strategy for handling data in research, providing modes of conceptualization for describing and explaining. The theory should provide clear enough categories and hypotheses so that crucial ones can be verified in present and future research; they must be clear enough to be readily operationalized in quantitative studies when they are appropriate". In pragmatic terms, "The goal of grounded theory is to generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved" (Glaser 1992, p. 73). In order to develop Grounded Theory, Glaser and Strauss proposed a qualitative scientific method that was constituted by rigorous, systematic procedures for gathering, codifying and analyzing data—significantly, data collection and analysis are not proposed as separate steps, but are conducted simultaneously. Thus, as Strauss and Corbin (1998, p. 23) later put it, a "grounded theory is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon." Thus, in contrast with other qualitative research methods, its focus is, or rather should be, on theory development.

The Grounded Theory Method (GTM) is employed increasingly in the IS field; however, it is applied in different ways and for different purposes, ranging from the full use of the method to combining Grounded Theory techniques with other methods (Urquhart 2007; Urquart, Lehamann and Myers 2010). Take, for example, that Urquhart (2007) reports that of the 32 IS studies that employed Grounded Theory between 1996 and 2005, just 11 made full use of the method; 11 papers employed the method to generate concepts; 4 applied a mix of the method with others; while 6 were mislabeled. Mataviren and Brown (2008) found that IS researchers differ in their understanding and use of the Grounded Theory Methodology. This study report that four distinct categories of approaches to the application of the Grounded Theory Methodology are employed by IS researchers: (1) "Glaserian" approaches; (2) "Straussian" approaches; (3) "mixed methodology" approaches; and (4) the straightforward use of grounded theory techniques in data "analysis". Only 8% of studies were using a pure "Glaserian" approach, while 17% employed a "Straussian" approach, and 13% a mixed methodology; in contrast; 62% of IS studies employed Grounded Theory analysis techniques. Furthermore, the majority of these studies were using a priori theory, which is problematic for those who adhere to Glaser's (1992) approach. This situation prompted Urquhart, Lehmann, and Myers (2010) to propose guidelines to help put the theory back in Grounded Theory. However, problems with the application of the Grounded Theory Method are not unique to the IS discipline (Bryant 2002a,b; Urquhart 2007; Urquart, Lehamann and Myers 2010): they have been the subject of much debate across the social sciences, which some arguing that such problems are associated with the method's ontological and epistemological underpinnings (cf. Charmaz 2000; Rennie 2007; Addison 1989; 2002; Jones and Noble 2007). It is, we think, worthwhile delineating the contrasting views on the problems surrounding the Grounded Theory approach.

Problems with the Grounded Theory Method

One of the most trenchant critiques of the Grounded Theory Method (GTM) comes from an IS researcher (Bryant, 2002a, p. 35), who asks that given the many problems in evidence with the approach, "Why not simply jettison GTM in its entirety? The weaknesses of GTM are evident. The key statements about the method are steeped in a scientism that was already largely undermined in philosophical terms in the 1970s and 1980s." He (ibid.) argues that "what the method highlights is a series of activities and considerations that ought to be primary for any form of research involving people." Bryant maintains, however, that if faults in the GTM are remedied it would be ideal for IS research. What he is arguing for is essentially a constructivist approach that "takes a middle ground between realist and postmodernist visions" (Bryant and Charmaz, 2007, p. 51). Researchers in reference disciplines take a similar line and argue that the approach is "imbued with positivism, with its objectivist underpinnings"; accordingly, it needs to be reconnected with its interpretivist foundations (Charmaz 2000, p. 510), which are to be found in symbolic interactionism (Travers 2001; Bryant and Charmaz 2007). This is a not insignificant point that finds agreement in leading proponents of the method. However, Urquhart, Lehamann and Myers (2010, p. 361) argues that following Glaser the Grounded Theory Method is "paradigmatically neutral" and can therefore "be used in positivist, interpretive and critical studies". This approach is evidently out of step with extant perspectives in the social sciences and in IS (cf. Bryant and Charmaz 2007). Thus, while some IS researchers view GTM as being

unproblematic, others such as Bryant (2002a) identify several of the acknowledged problems with the method and lay special emphasis on the philosophical underpinnings: these are echoed and expanded upon by others in reference disciplines (cf. Charmaz 2006). Take, for example, that Rennie and Fergus (2006) illustrate that while Glaser's (1992) positivist approach to method is purely inductive, Strauss's (1987) perspective involves deduction as well as induction. The use of deduction implies the application of theory a priori, something that Glaser and Straus (1967) initially avoided, and which is a cause for contention between them (Glaser 1992). In keeping with the pragmatist philosophy of Chicago School sociology and its symbolic interactionist paradigm (Travers 2001), Strauss and Corbin (1990, 1998) introduce a role for a priori theory to provide sensitizing concepts (cf. Klein and Myers 1999). In response, Glaser (1992) argues that the use of a priori theory does not allow theory to emerge from the data, rather a deductive approach 'forces' theory on to the data. To add to the induction vs. deduction debate, and in keeping with pragmatist philosophy, Rennie (2000) proposed that the methodology involves both abduction and induction, while also incorporating both realist and relativist perspectives (cf. Bryant and Charmaz 2007). While these are but a few of the problems commented on in the literature, Rennie and Fergus (2006, p. 484) summarize the paradoxes surrounding these issues nicely by pointing out that users of the Grounded Theory Method "*are encouraged to be naive about the phenomenon of interest while being encouraged to bring sensitizing concepts to it. They are encouraged to be descriptive in early stages of the analysis and conceptually abstract in later stages. They are given the impression that social phenomena are external to the researcher and awaiting discovery, while being told that these phenomena are to be formulated creatively. They are encouraged to believe that with the correct procedures they will be able to access social phenomena grounded in reality, while being advised that the returns from the grounding will vary depending on the interests of the particular analyst.*" This methodological confusion is not without consequences for IS research: however, the root causes are, we argue, ontological and epistemological (cf. Bryant and Charmaz 2007).

Premises and Research Objective

This study posits that while previous analysis of the Grounded Theory Method have indicated the existence of philosophical problems, the ontological ground and epistemological underpinning of the method has not been fully explored. This objective of this paper is to explore the philosophical foundations of the Grounded Theory Method and to illustrate by reasoned philosophical argument that the ontological ground of the method is to be found in a conception of the involved researcher, the primordial researcher-in-the world, as opposed to the rational purposive researcher, sitting over and above the worldly phenomena he or she is investigating (cf. Introna 1997).

The remainder of this paper is structured as follows: The second section introduces phenomenological hermeneutics and illustrates the relationship that exists between symbolic interactionism, which is said to underpin the Grounded Theory Method, and hermeneutics. The third and major section of this paper section then undertakes the recovery of the ontological foundations of the Grounded Theory Method: To achieve this it employs concepts from phenomenological hermeneutics such as the circle of understanding, the dialectic, phronesis and techne, to explore the ontological nature of the Researcher-in the-world. Significantly, it draws on previously interpretive research by the first author which builds on Orlikowski's (1993) seminal study on the Grounded Theory Method to argue that Grounded Theory is not solely the in the preserve of Glaser and Strauss (1967) or any of the subsequent variants. The paper then finishes with a discussion of the findings and offers concluding thoughts on the future direction of Grounded Theory in the IS Field.

Phenomenological Hermeneutics and the Grounded Theory Methodology

The previous section noted extant criticisms of the Grounded Theory Method on the basis of its positivist and empiricist orientation. Nevertheless, the method has more or less survived intact in the face of what Bernstein (1986) terms the recovery of the hermeneutical dimension of science in the mid-to-late 20th century (cf. Coyne 1995; Idhe 1990, 1999; Introna 1997). However, the latter project has been underway since the 19th century, chiefly led by Wilhelm Dilthey, to illustrate the unique epistemological and methodological nature of the *Geitseswissenschaften*— that is, the focus on interpretation and understanding in the social sciences and the humanities. However, in the 20th century, hermeneutics has taken on a new form and dimensions with the emergence of phenomenological or ontological hermeneutics (Madison 2001, Bernstein 1985). Phenomenological hermeneutics holds that understanding is the first and last goal of human existence, with interpretation as the means by which such understanding is achieved (Madison 2001). It is important to note that understanding is the mode of being of all

beings, whether they are researchers or the researched, and that interpretation and understanding are ontological not epistemological (Bernstein 1985, Ihde 1990, 1999; Introna 1997). Thus phenomenological hermeneutics presents itself as an overarching theory of the ontological constitution of the social world, which defines, describes, and explains understanding in ontological and not epistemological terms (Bernstein 1985; Heckman 1983, 1986).

In examining the different schools of interpretative thought for research on information technology, Coyne (1995) posits that four distinct strands of hermeneutic thought are in evidence: the conservative (foundationalist), the pragmatic (anti-foundationalist, constructivist), the critical (emancipatory), and the radical (deconstructionist) (cf. Hekman 1986). The difference between foundationalist and anti-foundationalist perspectives lies in the issue of method and the belief that in applying appropriate 'methods' the true meaning of the phenomenon (text or text analogue, e.g. speech, social action etc.) can be arrived at. This search for 'facts' or 'truths' that are enduring, a-historical and context-free, has led to one strand of hermeneutic thought being labeled as conservative or foundationalist (Bauman 1978; Hekman 1983, 1986; Coyne 1995). Coyne argues that Heidegger's and Gadamer's projects are pragmatic and anti-foundationalist in their perspective. In the context of the present essay on the Grounded Theory Method, the work of Rennie (2000, 2007) draws on the conservative strand of hermeneutics called methodical hermeneutics (albeit he introduces a pragmatic turn to his project), while Charmaz's (2007) approach may be categorized as constructivist/pragmatic and anti-foundationalist. Other approaches are also in evidence viz. Gibson (2007) proposes Critical Theory, while Clarke and Friese (2007) argue for a post-modern, radical approach to the application of the GTM. Action research, which may operate from any of the above perspectives, is also being used with the method (cf. Baskerville and Pries-Heje 1999; Dick 2007).

Several commentators have noted that the philosophic origins of the Grounded Theory Method are to be found in historical backgrounds of its proponents. Take, for example, that Barney Glaser from the positivist school of sociology with its quantitative orientation: interestingly, Glaser (1992, p. 7) argues "the fundamentals of Grounded Theory, the underlying analytic methodology, are in very large measure drawn" from his previous research background. On the other hand, Anselm Strauss was a qualitative researcher whose roots were in symbolic interactionism, which had its origins in pragmatic philosophy (Travers 2001; Charmaz 2006). It is clear from Glaser (1992) that the marriage of these two different philosophical, epistemological and methodological backgrounds produced more than the sum of their parts. However, several researchers have singled out the special influence of Symbolic Interactionist Herbert Blumer and the pragmatist philosophy of George Herbert Mead on the method, primarily through the contribution of Strauss. A close reading by the authors of Blumer's (1969) *Symbolic Interactionism: Perspective and Method*, revealed significant parallels with concepts in phenomenological hermeneutics. Bonner (1994) provides support for this view and holds that while there are differences between Gadamer's hermeneutics and Blumer's Symbolic Interactionism, there is also much in common between the two ontological perspectives. See Table 1 for a synopsis of the core premises of symbolic interactionism, which map well onto core constructs in ontological hermeneutics viz. (a) the different *horizons of understanding* held by human beings, and the *horizons of understanding* projected by phenomena, mediate social action; (b) the role of *language* and the *dialectic* in the *fusio- of-horizons of understanding* which precede social action; (c) the central role of the *circle of understanding* in the interpretive process through which understanding is arrived at. Hence, we were curious if this relationship with hermeneutics went deeper—it does, but the connection is via G.H. Mead, who exercised great influence on Blumer and other symbolic interactionists. It is little known that from 1889 to 1891 Mead attended the Humboldt-University in Berlin and was present at lectures given by Wilhelm Dilthey: thus, it is posited that Mead's pragmatic perspective was influenced by the Dilthey's hermeneutics (Jung 1995). Indeed, Jung (1995) discovered common threads between Mead and Heidegger, while Moran (1993) links the thought of Mead and Gadamer. Take for example, Mead's concepts of *symbolic interaction* and *non-symbolic interaction* as interpreted by Blumer (1969, p. 8): "Non-symbolic interaction takes place when one responds directly to the action of another without interpreting that action"; while "symbolic interaction involves interpretation of that action." These concepts clearly echo Heidegger's (1976) concepts of *Zuhanden* and *Vorhanden* viz. phenomena that are 'ready-to-hand' (*Zuhanden*) are not the object of interpretation as they possess a degree of familiarity that effectively sees them dissolved into a person's daily existence; while phenomena that are 'present-at-hand' (*Vorhanden*) require interpretation so that they may be comprehended following a breakdown in understanding. Of course, the common threads running through these different schools of philosophic thought may reflect the fact that are explaining the same phenomenon—the universal nature of human understanding and interpretation in the search for meaning in the life-world.

Table 1. Core Premises of Symbolic Interactionism	
	The Nature of Symbolic Interactionism *(Blumer 1969, p. 2)*
Premise 1	"…human beings act towards things on the basis of the meanings that the things have for them."
Premise 2	"…the meanings of such things is derived from, arises out of, the social action that one has with ones fellows."
Premise 3	"…these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters."

In arguing for an ontological hermeneutic perspective, Gadamer (1975, p. 446-447) argues that "the certainty that is imparted by the use of the scientific method does not suffice to guarantee truth". This is true of qualitative methods that are underpinned by a foundationalist approach to knowledge and truth—in this case the Grounded Theory Method. Thus, Gadamer is of the opinion that all 'methods' have limitations, which, nevertheless, can be addressed through the application of hermeneutical thought. Hence, following Bryant and Charmaz (2007) we argue for an anti-foundationalist approach to Grounded Theory informed by a pragmatic constructivist perspective based on phenomenological hermeneutics. In a broader context, this point has not been lost on IS researchers who argue for the use of a hermeneutic approach for IS research which incorporates a central role for the hermeneutic circle of understanding (cf. Introna 1997; Lee 1994; Myers 1995; Butler 1998; Klein and Myers 1999; Butler and Murphy 2007; Cole and Avison 2007). It is, therefore, strange to view the recent suggestion by Urquart, Lehamann and Myers (2010) that the Grounded Theory Method is a paradigmatically neutral, one size fits all approach. Such a perspective takes a view of the IS researcher as being objective, neutral, and rational, as opposed to being already involved in the life-world, in which subjectivity, prejudice, and irrationality are often the order of the day. Thus, 'in reality' researchers struggle to interpret and make sense of the phenomena that populate their life-world (which also includes the phenomena that they research) in order to understand them (cf. Introna 1997). In keeping with extant thought in the social sciences (cf. Bernstein 1986; Coyne 1995, Butler 1998, Rennie 2007), the remainder of this paper takes as its objective the recovery of hermeneutical dimension of qualitative research, with a special emphasis on the Grounded Theory Method. This exegesis discloses the interpretive foundations of the GTM using ontological or phenomenological hermeneutics. In order to provide practical examples, the paper draws on a previous paper by the first author in the *Information Systems Journal* (Butler 2002), that extended Orlikowski's (1993) Process Model of Organisational Change Around CASE Tools using an interpretive, case-based research strategy that employed hermeneutic method to examine the adoption and use of an Integrated Computer-aided System Engineering (I-CASE) system.

Recovering the Ontological Foundations of the Grounded Theory Method

This section applies concepts from phenomenological hermeneutics in support of this paper's central thesis. It first explores the ontological status of researchers and proceeds to describe the role of the circle of understanding in IS research, with an emphasis on the first circle to be negotiated. Following this, the role of Aristotelian phronesis and techne in IS research are discussed.

On the Ontological Status of the Researcher-in-the-World

According to phenomenological or ontological hermeneutics (Bernstein 1986; Madison 2001), IS researchers, whether novice or seasoned, find themselves already in the world with the phenomena which they wish to investigate—this is true whatever research approach they employ, Grounded Theory Method or not. They are, as

Heidegger (1976) observed, 'thrown' into the 'lifeworld', as such they share a common human history and 'lived experience' (*Erlebnis*) in a 'life-world' shaped by 'Tradition' with those they study. Furthermore, researchers interpret and understand their world in much the same way as other human beings (cf. Blumer 1969; Heidegger 1976; Ihde 1990; 1999). Thus, as social beings, researchers interpret the utterances, actions, and texts of other social actors in order to derive meaning from them. Ultimately, researchers' interpretations and understandings of the phenomena they study are based on the interpretations of other social actors. Thus, as Geertz (1973) points out, what researchers in the social sciences call data are really their interpretations (and understandings) of the interpretations, understandings and meanings of other actors (cf. Blumer 1969)—Giddens (1976) refers to this as the 'double hermeneutic'. However, as Heidegger points out, because researchers are already in the world, they operate from an existing horizon of understanding. This includes their personal theories of cause and effect, of precedents and outcomes, all of which influence their understanding of each other and the phenomena they study. Hence, their observations and interpretations are theory laden (cf. Gadamer, 1975; Idhe, 1990). Thus, the myth of the researcher as a 'blank slate' (cf. Urquhart and Fernandez 2006). The following sections elaborate on these themes through theoretical and empirical illustrations.

Repairing the Breakdown: Negotiating the Circle(s) of Understanding of IS Research

If, as Gadamer and Heidegger argue, all understanding has a circular structure related to the temporality of human existence, then an ontological understanding of IS research involves describing how researchers negotiate the hermeneutical circle of understanding. In keeping with the central tenets of phenomenological hermeneutics, the hermeneutic circle, structures all understanding, both positivist and interpretivist. Following Heidegger (1976), we argue that the process of understanding IS-related phenomena commences in the wake of a 'breakdown' in understanding of some aspect of an information system, whether in its conception, design, development, implementation or use (cf. Winograd and Flores 1986; Butler 1998; Cole and Avison 2007). The first question that needs to be addressed, therefore, is 'When, and under what conditions, does this 'breakdown' in understanding take place in a research context?' If we are honest about such matters, the 'breakdown' may be triggered by several sources: for example, a novice researcher might take the lead from his/her PhD supervisor, or a novice/experienced researcher might come across an interesting development in practice, and so on (cf. Walsham 2006). We argue that the hermeneutic circle of understanding of IS research is negotiated when a researcher reads and interprets extant research publications, which are; the interpretations and understandings of their fellow researchers. In its extreme form, the Grounded Theory Methodology excludes this crucial phase of empirical research from methodological consideration viz. "The researcher should not worry about covering the literature in the same field before his research begins, since it will always be there. It does not go away!" (Glaser 1992; p. 32). Glaser does however allow for integrating the literature during the grounded theory process. Yet we find precisely the same type of sense-making problems confronting researchers in this first literature review phase of research as in others, in that texts need to be analysed and interpreted in much the same way as those that contain data gathered from the field. True, the theories/concepts/categories etc. may be more easily identified in research manuscripts; however, they pose the same interpretive challenges for the researcher as field data.

On the Role of the Dialectic in the Circle of Understanding

The use of the Socratic dialectic of question and answer, the Hegelian dialectic of thesis, antithesis and synthesis, and the Reductionist/analytic dialectic of subdivision into 'parts' and reconstitution into the hermeneutic 'whole' helps the researcher probe beneath the 'text' or 'text analogue' of previous research, interview transcripts, noted observations, etc. in order to deconstruct the 'whole' into its component 'parts' (Butler 1998). Gadamer argues that the 'logical structure of openness' is to be found in the Socratic dialectic of question and answer. In order to effect a fusion-of-horizons between the horizon of the interpreter and the object of their interpretation, a dialogue takes place between the individual and the phenomenon of interest. The Hegelian dialectic comes into play when a particular interpretation or thesis is worked out with a competing interpretation or antithesis so as to arrive at a newer, fuller and more informed interpretation or understanding—the Hegelian synthesis or Gadamerian fusion-of-horizons results. The Hegelian dialectic involves an interpretive synthesis of pre-understanding with 'objective' observations in order to make sense of a phenomenon and thus attain an understanding of it. It is through the identification and analysis of the 'parts' that constitute the 'whole' of a phenomenon (e.g. themes, sub-categories and categories) and their reconstitution into the 'whole' that the structural model of the reductionist/analytic dialectic proceeds. Thus, in subjecting social phenomena to a structural analysis, Ricoeur (1981; p. 220) argues that "*we proceed from naïve*

interpretations to critical interpretations, from surface interpretations to depth interpretations." A Hegelian Dialectic of Thesis, Antithesis, and Synthesis should, we argue, be applied to reconcile the often conflicting 'horizons' projected by the parts (e.g. sub-categories and categories) and also the subjective pre-understanding of the researcher.

Practical examples[1] drawing on the aforementioned research by Butler (2000) will illustrate these concepts and those related to the circle of understanding.

Example #1*: Although an IT professional at the time of the study on the adoption and use of I-CASE system, I had a limited understanding of the IS development process for which it was being applied. On an initial reading of the literature, I discovered that there were major gaps in my understanding of the use of CASE for IS development; thus the phenomenon acquired the ontological status of being 'present-at-hand' in what was a breakdown in my understanding of the phenomenon—that is, it required interpretation in order to generate meaning and arrive at a preliminary understanding. What was a significant body of literature then become the object of reflection and theoretical interest in order to repair this 'breakdown in understanding'. Nevertheless, because I was both a novice researcher with practical experience as an IT professional I had a 'pre-understanding' of the phenomenon (cf. Heidegger, 1976 on the relationship between 'fore-having', 'fore-sight', and 'fore-conception' as 'pre-understanding'). It was this 'pre-understanding' that enabled me to 'read' the literature, to enter into a Socratic, Hegelian and Reductionist/analytic dialectics with to break it down into its component parts, e.g. concepts, categories and relationships, in order to transform a phenomenon that was 'present-at-hand' into one that was 'ready-to-hand'—that is, understood at a particular point in time. Thus, I categorized the literature according to research findings that identified the benefits of CASE adoption and use versus reported problems and drawbacks. The purpose of imposing this structure on the data was to establish a hermeneutic dialectic, which found expression in the research questions posed, the answer to which would, it was hoped, result in a greater understanding of the phenomenon. Hence, for examples, while extant research argued that CASE (1) "Provides a formal and standardised approach to systems development"; (2) Provides an adaptable and consistent development platform; and (3) Results in more efficient development procedures: it was also evident from the literature that there was (1) No proof of payback; (2) Multiple CASE products and confusion of alternatives, e.g. different technologies /methodologies/features; (3) Steep learning curves, and so on. Given these contradictory findings I made the following statement with some degree of confidence: "It is clear that in order to resolve the contradictory findings of previous research a comprehensive and unequivocal description of the organizational content, contexts and processes that lead to the successful implementation and use of CASE is required. This task is confounded by the manner in which CASE as an information technology in itself has evolved since the early 1990s; hence, it may be that problems and deficiencies of a technical nature with earlier CASE products may not now exist" (Butler 2000; p. 170). Thus, I theorized that there was need to revisit the categories identified by Orlikowski (1993) viz. the institutional contexts, conditions for adopting and using CASE tools, the CASE adoption and use processes, and consequences for the organization. In the process I would help answer Orlikowski's call for her Grounded Theory to be verified while also identifying additional categories/concepts. Table 2 below illustrates the Circles of Understanding I negotiated in conducting this research.*

As this researcher discovered, IS phenomena have a 'whole'-'part' construction—that is the 'whole' of a phenomenon is comprised of the 'parts' or the 'details' that constitute it (Gadamer 1975). Accordingly, interpretation and understanding is ontologically circular in structure—the interpretation of a phenomenon (the hermeneutical 'whole') begins by the reading and interpretation of its component phenomena (the 'parts'). Table 2 attempts to capture at a high level of abstraction, the circles of understanding in the above study to illustrate the arguments made herein.

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[1] The examples follow a technique recommended by Dick Boland to the first author for explaining the use of his hermeneutic method for research on IS.

Circle	Researcher's Horizon	Phenomenon's Horizon	
Table 2. Circle of Understanding in the Research Process (adapted from Butler 1998, 2000)			
		Whole	**Parts**
A	Pre-understanding of IS development modulated by the novice researcher's phronesis, techne and prejudices as an IT professional.	Extant body of research literature of IS development, software engineering and CASE.	Theories, concepts, themes, findings, practitioner insights etc. in major streams of the literature on systems development—e.g. IS and software development, prototyping and CASE. Over 200 papers were read as part of this study.
B	The researcher's horizon is constituted by the fusion-of-horizons of understanding that resulted from making sense of theoretical/ conceptual/empirical perspectives in the literature in Circle A. Orlikowski's (1993) model acted as a conceptual framework for 'seed categories'	Empirical study of the adoption, implementation and use of the Information Engineering Facility (IEF) Integrated CASE (I-CASE) and its related development, organisational, and external environments.	'World views' of 19 interviewees including IS managers, IT professionals in the organisation's quality unit, the project manager of the Rapid Application Development (RAD) team, and the analysts, programmers and user representative who used the I-CASE workbench to develop the IS studied. Additional insights came from documentary evidence and informal sources.
C	The researcher's horizon of understanding now consisted of cumulative perspectives resulting in fusion-of-horizons of his theoretical pre-understanding produced from Circle B.	Completed data analysis and the accumulated research artefacts on the phenomenon and its environment that describe and give definition to the adoption and use of the I-CASE platform in this organization.	Coded interview transcriptions and notes; write up of informal conversations etc. At a more fundamental level, the reductionist/analytical dialectic conducted enabled by content and comparative data analysis revealed the underlying activities/perspectives of the social actors involved in the process of I-CASE adoption and use.
D	The researcher's horizon encompassed the cumulative fusion-of-horizons as represented by his understanding of the I-CASE adoption and use in the organization studied resulting from Circle C.	The explanation provided by the published research manuscript in the Information Systems Journal which extends and elaborates Orlikowski's (1993) Grounded Theory.	The themes, descriptions, arguments, graphical mechanisms, tables, descriptive matrices, contained in various drafts and final version of the paper. Discussions and conclusions that coalesce to describe and explain the phenomenon etc. Appendix A in the paper presents findings that help verify Orlikowski's (1993) Grounded Theory of CASE Tools as Organizational Change.
The fusion-of-horizons presented in the published paper has become a phenomenon that projects a 'horizon of understanding' in the form of a verified theory of I-CASE adoption and use that requires interpretation by its readers. And so the movement through the circle continues…			

In an IS research context, the first pass through the circle-of-understanding will see the researcher identify the component 'parts' of the phenomenon—in the context of a literature review such as Butler (2000) conducted, these parts were constituted by the theories, concepts, themes, findings, etc. of previous research on CASE and the IS development environment and processes (cf. Butler 1998 and Table 2). The researcher will innately (or explicitly) apply a dialectic approach (akin to the constant comparative method) to identify these 'parts' as theories, concepts, compare and contrast findings, and so on. Operating from a holistic perspective, each 'part' will be interpreted and

its meaning and relationship to the 'whole' consolidated into an emergent understanding of the IS phenomenon under study. In cycling through the circle of understanding, each 'part' is consolidated, and in so doing different perspectives emerge—the 'horizons of understanding' of interpreter and phenomenon, as represented in the literature, will gradually fuse. There is, as Gadamer illustrates, a formal relationship between these 'parts' (component phenomena), the 'whole', and what he terms the 'subjective reflex' that an actor adopts toward a phenomenon—that is, the intuitive anticipation of the 'whole' and its subsequent articulation in the 'parts'. Therefore, commencing with the researcher's pre-understanding—or as Gadamer (1975) termed it, prejudice. Gadamer (ibid., p. 240) argues that "*a prejudice is a provisional legal verdict before the final verdict is reached.*" A prejudice may be true or false, accurate or inaccurate. Furthermore, it informs a social actor's 'horizon of understanding'. Furthermore, Gadamer (1975) introduce the concepts of 'tradition' and 'authority' to illustrate that the authority of tradition shapes an actor's pre-understanding/prejudices. Here, the concept of 'lived experience' describes the relationship between IS researchers and the tradition of research in the IS discipline; the disciplinary matrix provides the contexts for their understanding and contributes to the formation of their prejudices. Unsurprisingly, the use of Grounded Theory in IS research indicates that positivist, post-positivist and various strands of interpretivist traditions within the IS field exert a visible influence on researchers' application of the method (cf. Bryant 2002 a,b; Hughes and Jones 2003).

In the 'working out' of prejudices two horizons of understanding are fused—those of researcher and the phenomenon under investigation. The fusion-of-horizons is therefore the culmination of the act of understanding between interpreter and interpreted. As with Heideggerian pre-understanding, Gadamer argues that dialectical or critical reasoning is required to distinguish between legitimate and illegitimate prejudice (the above study employed interpretive principles posited by Madison (1988)). Likewise, Heidegger (1976, p. 153) argues that researchers need "to make the scientific theme secure out these fore-structures in terms of the things themselves." IS researchers operating from the perspective of the scientific method or positivist understanding will be required to eliminate all 'bias', while pure grounded theorists will be expected to adopt a tabula rasa—all of which is not only impractical, but impossible (cf. Feyerabend 1972; Gadamer 1975).

On reflection, we argue that there exist as many 'mini-fusions-of-horizons' as there are component phenomena (i.e. parts/categories and sub-categories), the integrative combination of which results in the fusion-of-horizons that takes place when the literature review/ theory building etc. is complete. We therefore posit that there will be as many 'circles' to be worked through as there are 'breakdowns in understanding' to be repaired by reading and interpreting literature publications. Thus, while this paper conceptualizes the research process in terms of the 'circles' in Table 2, it must be noted that these in turn contain smaller circles that will need to be negotiated as 'mini-breakdowns' are confronted, and so on, down to, for example, the 'circle structure' of an individual sentence in a text (cf. Glaser 1992 on coding). It must be remembered here that Gadamer (1975) stresses that the understanding attained in negotiating a 'circle' is not in any way perfect; rather the fusion-of-horizons and the understanding it endows upon the researcher is temporally-based.

Theory as Pre-Understanding

Wheeler (2002) points out that theories operate at molar-, meso- and micro-levels: Molar theory maps onto formal theory as defined by grounded theorists, while meso-and micro- level theory maps onto substantive theory (cf. Urquhart et al. 2010) .Wheeler argues that high-level or molar theories require modification for application at meso- or micro-levels and to explain and predict particular phenomena. Urquhart and Fernandez (2006) echo the argument that molar- or even meso-level theory could be employed by Grounded Theory researchers and still permit theory to emerge rather than be 'forced' from the data (cf. Glaser 1992). However, Klein and Myers (1999, p. 75) maintain that in the interpretivist mode of research "theory is used in a different way than in positivist research; interpretive researchers are not so interested in "falsifying" theories as in using theory more as a "sensitizing device" to view the world in a certain way…Interpretive researchers in information systems tend not to generalize to philosophically abstract categories but to social theories such as structuration theory or actor network theory." Hence, such studies may employ research questions rather than propositions/hypotheses to guide the conduct of their research. Nevertheless, this is supportive of the view of theory as pre-understanding, as will be explained.

Taking a pragmatic stance, we argue that regardless of the research paradigm in use, a researcher's pre-understanding of a phenomenon prior to his/her analysis of the literature will be transformed into a provisional 'understanding' in the form of theory. Whichever epistemological or methodological position, such theoretical perspectives constitute the researcher's pre-understanding for testing/verification/elaboration in terms of positivist

approaches, and for working out the phenomenon in terms of the thing-in-itself in interpretivist approaches whose aim it is to understand patterns and regularities, rather than arrive at universal law, to develop substantive rather than formal theory. We also agree with Wheeler (2002) and Lee (1991) who argue that interpretivist research could employ the results of positivist research to elaborate on existing, or to develop original, theory prior to testing. In terms of choosing theories when confronted with several possible explanations of the phenomenon of interest from the literature, Walsham (2006) argues that researchers should choose theories that provide valuable insights—not because they are fashionable or because their supervisors recommend them. These insights underpin this paper's hypothesis that pre-understanding is vital for all research, including Grounded Theory. And if such pre-understanding is expressed in the form of theoretical propositions and/or hypotheses, it will, as indicated, help both positivist and interpretivist ask appropriate questions, in order to apprehend and understand the phenomenon of interest.

It is peculiar then that Glaser (1992) argues that familiarity with prior research and theories on the phenomenon of study result in 'forcing', as opposed to the 'emergence', of grounded theory. The problem here is said to be one of theoretical bias and of controlling for it using methodology (Rennie and Fergus 2006). Ihde (1990) argues that all theories are 'value laden'. It follows that a theory (e.g. the Ground Theory Method) which mandates that a priori theory is to be avoided is as value laden as any other. That being said, phenomenological hermeneutics highlights that the wise application of theory permits the phenomenon to 'speak for itself', if the researcher has the integrity and 'practical wisdom' (i.e. Aristotle's phronesis) to permit a fusion-of-horizons to occur. For as C.S. Pierce (p. 156) argues "*We must begin with all the prejudices that we actually have when we enter upon the study…These prejudices are not to be dispelled by a maxim, for they are the things which does not occur to us can be questioned.*" The proponents of pure Grounded Theory advocate phenomenological bracketing to control for bias or 'prejudice' (cf. Rennie and Fergus, 2006). In his discussion of Gadamer's ontological hermeneutics, Bernstein (1983, p. 128), however, argues that "*We cannot…discriminate which of our prejudices are blind and which are enabling…by an act of pure self-reflection, such as Descartes claimed, in which we bracket all prejudices, for there is no knowledge and no understanding without prejudice.*" Thus, it should be noted that the fusion-of-horizons which results in understanding in no way indicates that the data which will inform the category building necessary to establish grounded theory will be ignored or suppressed in the light of a priori theory. It is here that the phronesis-based integrity of the researcher, rather than the techne of Grounded Theory plays a pivotal role, as will presently be seen.

On the Importance of Phronesis and Techne for Researchers

Gadamer's (1975) phenomenological hermeneutics highlights the importance of Aristotlean phronesis (moral or self knowledge or practical wisdom) and techne (the skill or knowledge in the act of doing) to the hermeneutical problems of the social sciences. A researcher's moral or self-knowledge (phronesis) is a synthesis of his temporal experience of social phenomena with his ability to perform practical actions in relation to such phenomena. According to Gadamer's (1975) interpretation of Aristotle's phronesis, experiential, self-knowledge cannot be learned or forgotten; it is ethical and moral in character and, as such, it is the supreme influence on individual action. It is clear from Gadamer, as Aristotle before him, that skills-based knowledge (techne) and theoretical knowledge (as theoria, sophia, or episteme) are informed by the self-knowledge or practical wisdom (phronesis) of social actors. Thus, self-knowledge embraces, as Gadamer indicates, both the means (e.g. the application of the Grounded Theory Method) and ends of social action (in the case of research, Grounded Theory). It is significant also that Gadamer clearly differentiates between phronesis, techne and theoretical knowledge, giving primacy to the former. For as Gadamer points out, a techne can be learned, but a phronesis cannot. IS researchers require significant phronesis and techne in-order-to perform a critical review of extant literature and in theory building. However, the same applies to research design, sampling strategies employed in the selection of units of analysis and data sources, to the application of method (in data collection and analysis), and (finally) in constructing a research report or meta-narrative on the phenomena of interest. There are various ways through which IS researchers—novice and otherwise—can appropriate and build research techne—these may be through formal, taught PhD programmes, master/apprentice models, or through self-tuition. However, as Gadamer (1975, p. 315) points out, "There is a curious tension between a techne that is taught and one that is acquired through experience." The latter comes only with time.

In order to bring greater rigor to the Grounded Theory Methodology, Strauss and Corbin (1990) discussed the procedures, canons and evaluative criteria for researchers. These were further elaborated in Strauss and Corbin (1998). In so doing, Strauss and Corbin are attempting to make explicit their knowledge (tacit and otherwise) of the

application of the method. Their approach has been criticised as being overly prescriptive by Glaser (1992); Charmaz (2000) echoes this but goes further in highlighting the problem in assuming a neutral observer who is unbiased in data collection and analysis. Put rather more bluntly, Strauss and Corbin assume (as does Glaser in effect) that the correct application of method, once learned, will generate theory high in truth value. Gadamer (1975) questions the ability of any method, scientific or otherwise, in ascertaining 'truth' (cf. Ricoeur 1991, 1984). We know from Ihde (1990, 1999) and Charmaz (2000) that the choice of method and its application will depend on the subjective disposition of the researcher who will, because of his/her Gadamerian prejudice, play an active, not a neutral, role in the research process from beginning to end (cf. Walsham 2006). There is, nevertheless, a positive side to Strauss and Corbin's project, as they, more than Glaser, attempt to make explicit the knowledge required to apply the method. This would certainly help the novice grounded theorist in repairing the 'breakdown in understanding' he/she will encounter in first applying the methodology. It is only when internalized as tacit knowledge (still a techne) and combined with the researcher's practical knowledge (phronesis) that such knowledge can be effectively applied.

In contrast to the explicit application of method advocated in Grounded Theory, Walsham (2006, p. 325) makes the following claims which put into question the unthinking use of 'method': "*I believe that the researcher's best tool for analysis is his or her own mind, supplemented by the minds of others when work and ideas are exposed to them*". He also indicates that the time transcribing interviews could sometimes be spend gathering more data and conducting more analysis, while excessive coding, particularly using software tools, can be a displacement activity and be counterproductive. There are other areas identified by Walsham (2006) where the practical knowledge (phronesis) of the researcher can play an important role. The first is gaining and maintaining access to research sites, the second is in the researcher's credibility/position in the eyes of those being researched. The IS field differs from sociology and many of the reference disciplines which applies grounded theory; i.e. the fields of medicine and psychology (cf. Addison 1990; Strauss and Corbin 1990; Charmaz 2000; Rennie 2000, 2007). In these disciplines, social workers/sociologist, doctors, nurses, psychologists, psychiatrists, and so on, have particular power relationships with the social actors they study—the socially and economically disadvantaged, patients, patients' relatives, and so on. There are therefore knowledge and power asymmetries between the researcher and the researched. Certain action research scenarios aside, business executives, project managers, IT professionals, developers and users, typically, but not exclusively, see themselves as having a certain status—thus the knowledge/power asymmetry may move in the other direction. While Walsham (2006) highlights the need for good social skills on behalf of researchers, the latter's credibility will also have a bearing on the type of access and depth of data acquired. Grounded Theory Methodology is more or less silent on such matters. Certainly, the naïve 'Glasarian' researcher who knows nothing of the problems IT and business practitioners face, or of the phenomenon being researched, would possess little credibility or relevance to practice, assuming, of course, that they could gain access to the research site in the first instance. Thus, without being armed with a thorough pre-understanding of the phenomenon to be researched or indeed well-grounded theoretical insights, they will, we argue, be at a distinct disadvantage in research contexts.

The Circles of Understanding of Data Gathering and Analysis

It is clear from Strauss and Corbin (1990) that data collection and analysis are the central focus of the Grounded Theory Methodology (see also, Charmaz 2000, 2006). Researchers in the social sciences, including the IS field, employ 'soft' technological artifacts that act as a lens with which to gather empirical data on the phenomena under investigation. These include, for example, research artifacts such as a statement of a research objective(s), related research questions, theoretical models that describe the relationships between the constructs of interest, associated survey instruments, structured interview protocols, statistical methods, data analysis techniques etc. For positivists, the scientific project can, however, be secured as techniques can be applied by researchers to ensure instrument validity (Straub et al. 2005); while the demands on interpretivist researchers for rigour are no less exacting (Lincoln and Guba 1985; Walsham 2006).

Idhe (1999) argues that all human action and interpretation of reality are mediated by technological artifacts. Thus, research instruments play a hermeneutical role in arriving at scientific knowledge—this applies to the methods and techniques of both positivist and interpretivist researchers, it is therefore relevant to the application of the Grounded Theory Method, which is employed freely by researchers of both persuasions. Following Idhe (1999) in his articulation of a 'strong program' on the hermeneutic role of instruments, it can be argued that research instruments are not neutral in that they do not offer a transparent, distortion free lens with which to view phenomena. They can

effectively determine what is seen and how it is interpreted. Thus, the researcher as a human instrument and the techniques he/she employs determines how social and organisational phenomena are perceived. Hence, we can understand Glaser's (1992) concerns about a priori theory. However, the other side of the coin is that without the benefits of a pre-understanding, theoretical or otherwise, the human research instrument is, in the Glaserian perspective, un-calibrated vis-à-vis the phenomenon of interest. The Grounded Theory Method's techniques act instead to direct the researcher's engagement with the phenomenon in both data gathering and analysis. It is evident, however, from our previous discussion that the 'horizon of understanding' which emanates from the transition through the initial circle of understanding (Circle A in Table 2) will, whether grounded theorists like it or not, be applied by the researcher in the act of interpretation in subsequent cycles (Table 2 B-D: the data gathering, analysis, write-up phases etc.). Thus the researcher's pre-understanding will always be employed to interpret and understand the phenomena under study using the Socratic dialectic of question and answer. The better this understanding, the more relevant and informed the questions will be. Thus, in order to repair breakdowns and enter the circles of understanding of data gathering and analysis, qualitative researchers will, typically, frame their investigations using questions related to their research objective (cf. Davis et al. 1992; Butler 1998). These research questions will reflect the interpretivist researcher's explicit and tacit pre-understanding of the phenomena. This will range from high-level general research questions, to those that are derived from a study's theory or conceptual model/framework. Such questions may be used to inform structured or unstructured interviews in order to elicit descriptive narratives from social actors. Whether or not a researcher's pre-understanding consists of valid prejudices, in whole or in part, will be put to the test in the dialectic of question and answer that will result in the fusion-of-horizons of the interpreter and the interpreted. Questions will also inform interpretations of social action if participant observation is employed—informal discussions and the actions of social actors constitute the data here. Thus, subjective understandings of social actors as communicated in research dialogues or social action will, in turn, be made sense of and interpreted by the researcher.

The first movement (or pass) through this 'circle of understanding' begins with the sampling strategy. Patton (1990) points out that qualitative researchers employ purposeful or purposive sampling, which is, in essence, the selection of data sources that meet certain criteria, the most fundamental criterion for which is the justifiable selection of information rich cases for in-depth study on the phenomenon of interest. While theoretical sampling is the preferred option for Grounded Theory, it may not always be possible. The overall logic behind qualitative sampling strategies, especially in relation to the size of the samples, is how comprehensively the research questions are answered. However, pure theoretical sampling is more emergent, as the questions in a Grounded Theory approach emerge from the data, as opposed to being stated a priori (Glaser, 1992; Strauss and Corbin, 1990). We argue, however, that in interpretivist research, there will always be a priori questions and there will always be questions that emerge during the research, as the researcher endeavours to make sense of contrasting and conflicting speech acts, actions and texts in the wake of successive 'breakdowns in understanding' while data gathering and in analysis. The dialectic is the key hermeneutic technique here as researchers undertake a fusion-of-horizons with the narrative accounts of social actors, interpretations of social action, and the various texts (cf. Myers 1995; Butler 1998; Cole and Avison 2007)

In a typical data analysis the 'parts' (themes, sub-categories etc.) are first identified through a dialectically-informed interpretation and usually tagged using codes, as with the Grounded Theory Method. In IS studies codes are typically generated from the data in interview transcripts with reference to, but not 'forced' by, a priori concepts which act as 'seed categories'. We argue that the type of line-by-line coding employed in developing grounded theory in healthcare research (cf. Charmaz 2000, 2006) may be unnecessary given the nature of the phenomena and associated data gathered in IS research projects. We argue, based on our experience, that paragraphs typically generate at least one code entry, with these being consolidated with others emerging in subsequent cycles through the texts to form sub-categories. Normally, such codes/sub-categories point to social actors, roles, activities, status, and events—each related to some problems or solution experienced directly or indirectly by the interviewee Hence, following Butler (1998) we argue that interpretive researchers should ideally apply theoretical concepts and research questions in the form of the Socratic question and Hegelian thesis (pre-understanding). If the researcher is open to working out his/her prejudices, the content, themes, categories and patterns that the interview narratives etc. project will be viewed as an antithesis (or Antitheses). Through the application of the Socratic and Analytic/Reductionist dialectics, a synthesis or fusion-of-horizons of understanding will emerge as opposed to being 'forced' (cf. Glaser 1992). The cycling through this various iterations ends when the point of informational redundancy or saturation is reached, and providing the researcher has been honest and trustworthy (cf. Lincoln and Guba 1985), it is assumed that understanding has been attained and the explanations offered are valid.

An additional example from Butler (2000) will highlight the effectiveness of a purely interpretive approach over the Grounded Theory Method applied by Orlikowski (1993).

Example #2: *In Butler (2000) I report that "Being a member of the organization chosen for study, the author was what Bødker & Pedersen (1991) have termed a 'cultural insider'. Hence, as a member of the general business constituency and an IT professional, [I] was intimate with several of the subuniverses of reality that comprised the overall institutional reality (see Berger & Luckmann, 1966). This provided the 'human instrument' of Lincoln & Guba (1985) with valuable insights into the organization's culture and climate, and this greatly aided in the interpretation of the case." While social skills and shared organisational experience permitted me to maximize the opportunities for data gathering and enhance the quality and depth if my interpretations, in terms of the Environmental and Organizational Contexts of Orlikowski's (1993) Model, it was my pre-understanding of the phenomenon in terms of the technical features of the sophisticated IEF I-CASE system that had been adopted and used to develop the company's service delivery and fault handling system. (Interestingly both the system and the latest version of the I-CASE platform is still in use today). A knowledge of, related benefits and drawbacks of I-CASE reported in the literature that enabled me to enter into a meaningful dialogue with IT executives, the project manager and his team of developers on the phenomenon. This maximized the scope and depth of data gathering on the phenomenon. As did gathering data on the various categories and concepts in Orlikowski's (1993) model viz. Environmental Context: Customers, Competitors and Technologies; Organisational Context: Corporate Strategies; Structure and Culture, and so on. However, as the interviews were semi-structured, interviewees freely narrated their opinions, roles and experiences. As indicated in the paper, the constant comparative analysis technique was applied; however, I found myself engaging in this quite naturally as the interviews proceeded, once the circles of understanding were entered, conscious as I was of the need to question, interpret, reflect, and resolve apparent conflicts in accounts. What tended to trigger questions most were apparent anomalies or inconsistencies in interviewee's accounts or most often a failure to understand on my behalf what was being said. The Content Analysis approach involved a systematic form of coding initially based on the categories and concepts identified in the literature and Orlikowski's model. Far from the 'forcing' described by Glaser (1992), it helped highlight themes and patterns in the data that did not conform. In some ways, it made that task of identifying additional categories and concepts that much easier. Take, for example, that one of the major contributions of this study was the identification of additional concepts such as: Team Selection and Makeup; Training; Development Approach; I-CASE Tools employed; Project Management; Requirements Analysis; Vendor Support; Testing; Resolution of Additional Problems and Miscellaneous Issues. These would have been grouped beneath the Adopting and Using CASE Tools Category; however, a new category was created I-CASE Adoption and Use Process. This contributed an additional 9 (50%) to Orlikowski's 18 concepts. Issues of a dialectical nature that required working out "in terms of the things themselves" were personality and professional conflicts between the lead analyst and the lead programmer. These issues found their context in the optimal use of I-CASE viz. should the code that was generated automatically from the data and process models be handcrafted to optimize its performance? The complexities and sensitivities involved in unpacking this issue are not captured in the paper viz. the programmer's perspective on well-crafted code vs. the analysts perspective of adhering to the methodology; however, the Socratic and Hegelian dialectics provided appropriate mechanism in first and subsequent interviews and informal conversations with the project manager.*

Building Theory: From Social Narratives to Research Narratives

According to Gadamer (1975), it is only through language and dialogue that we can begin to know the world, to possess a community of life and, hence, arrive at a shared common meaning (cf. Bruner, 1991). Paul Ricoeur (1984) elaborates on this theme to explain how dialogic narratives describe and integrate a set of events ('parts') into a 'whole'. The 'whole-part' structure of the hermeneutic circle as narrative permits accounts of practical action (as key elements or events in narrative) to be integrated into a coherent account of 'lived experience'. Ricoeur (1981) argues that this integrative explanation results in a comprehensive understanding from which a temporally qualified theoretical explanation may be derived; however, "*the kind of explanation which is implied by the structural model appears to be quite different from the classical causal model, especially if causation is interpreted in Human terms as a regular sequence of antecedents and consequences with no inner logical connection between them*" (Ricoeur 1981, p. 219). A correlative rather than causal explanation of events is indicated by Ricoeur (1991); however, this explanation is argued by Ricoeur to be deeper than that posed by the causal question 'What relationship exists between these events, if any, and what is its strength? Rather it answers such questions as 'Why does this state of affairs exist and how did it come about?' It is our experience in building 'Grounded Theory' across several studies

and research sites, and in observing PhD students do likewise, that while coding and collating categories is important, and memo writing is a key contribution in hypothesis building, the creative act of constructing theory occurs in cycling between writing the research meta-narrative and the analysis of data. Here the coded categories are woven into a coherent whole through the constructivist narrative based on dialectic between the interpretations of social actors and research texts and the interpretations of the researcher. We argue that the only way to close the 'circle of understanding', to negotiate the final arc between understanding and explanation, is narrative and rhetoric (cf. Rennie, 2000).

Interpretations and Conclusions

T.H. Huxley argued that "*Science is…nothing but trained and organised common-sense.*" Glaser and Strauss (1967) developed their Grounded Theory Methodology from their experiences in conducting research in US hospitals during the 1960s. This type of research differs significantly from typical IS studies. Nevertheless, the widespread adoption of their method in the social sciences is, we believe, due to the fact that it employs the type of common-sense Huxley refers to, and this is a key reason for its proliferation and relative success. The only issue we take with the approach is that to-date, underlying issues of ontology and epistemology have not been comprehensively addressed, particularly in the IS field; hence, we argue that the theory of Grounded Theory is not sufficiently grounded, particularly as its hermeneutic foundations have not been the subject of sufficient debate.

Recovering the Hermeneutic Ground of Grounded Theory

The philosophical hermeneutics of Heidegger (1976) and Gadamer (1975) are concerned with explaining the ontological 'being-in-the-world' of humans—an existence which is characterised by interpretation, and which is governed by the hermeneutic circle of understanding. We argue that the sense-making interpretations of Glaser and Strauss were governed by the same hermeneutic circle as that which was (and is) employed by the social actors they studied. The only difference is that they made what was (and is) tacit and implicit, explicit in the form of method. This paper attempts to illustrate this point and agues that many interpretivist researchers in the humanities and the social sciences do likewise, whether they employ the Grounded Theory Method or not. Researches across the social sciences argue that the Grounded Theory Methodology is weakened by insufficient attention to epistemological problems—the substantive problem is, however, ontological, as Gadamer (19975) indicates (cf. Hekman 1983; Bernstein 1996). Hence, this paper's objective is to illustrate this, and in the process to ground Grounded Theory in-the-world using phenomenological hermeneutics. This approach, we argue, also addresses some of the limitations found in Rennie's (2000, 2007) foundationalist methodical hermeneutics. Thus, we believe that this paper makes a timely contribution to the philosophical debate surrounding Grounded Theory and IS research. We also argue that it will help both novice and experienced researchers further their understanding of these important issues viz. (1) That there are major differences among Grounded Theorists in relation to the application of the method and that these differences relate to epistemological differences that could be negated through ontological reflection; (2) how the important issue of a priori theory as pre-understanding is effectively ignored; and (3) how techne is given precedence over phronesis in the application of the method. Thus, we illustrate that the methodology has a chequered history and has, to date, a limited impact on cumulative theory building in IS research.

Based on arguments presented above we argue that IS researchers should not for pragmatic reasons enter the field without a solid grounding in the literature or a priori theory as pre-understanding. We also argue that there is an over-emphasis on techne in the application of the method and an under-emphasis on practical knowledge (cf. Walsham, 2006). The challange for IS researchers is to work out their pre-understandings in terms of the phenomena studied—not pretend that Gadamerian prejudice does not exist. As Charmaz (2000, 2006) points out, the Grounded Theory researcher is not a data conduit for discovering, gathering, and representing 'objective facts'. Thus, we argue that the researcher "who believes he is free of prejudices, relying on the objectivity of his procedures and denying that he himself is conditioned by historical circumstances, experiences the power of the prejudices that unconsciously dominate him" (Gadamer 1975, p. 360). Accordingly, as Gadamer (ibid.) points out "[a] person who does not admit that he is dominated by his prejudices will fail to see what manifests itself by their light." We agree with Gadamer (1975, p. 299) that this will require of researchers, be they of positivist or interpretivist understandings, a "hermeneutically trained mind…[that] will make consciousness the prejudices governing … understanding." Thus researchers with a 'hermeneutically trained mind' will properly incorporate their hermeneutical pre-understanding of what Heidegger termed 'the things themselves'—the phenomena being

researched—in in order to formally and rigorously articulate theoretical propositions and hypotheses, or a comprehensive set of questions (thesis) to guide their research. However, as Gadamer points out we can never fully exorcise prejudice. These may be answered in the form of a dialectical (antithesis) to attain a comprehensive understanding and arrive at theoretical explanation that has 'empirical fidelity' with 'lived experience' of IS practitioners and other social actors, in a 'life-world' increasingly constituted by IT. We argue also that a phronesis of the researcher, rather than the techne of Grounded Theory, plays a pivotal role in shaping a 'hermeneutically trained mind'.

We believe that the Grounded Theory Method could greatly benefit from explicit recognition of its interpretivist foundations—only then, we argue, can meta-narratives be constructed to define and describe grounded theoretical concepts and explain correlations between them. Ricoeur (1981, p. 219) states: "Ultimately, the correlation between explanation and understanding, between understanding and explanation, is the 'hermeneutical circle'." Drawing on insights from Bruner (1990) and Ricoeur (1981, 1991) we can say that in negotiating the final arc in the 'circle of understanding' of interpretivist research, the researcher enters into dialectic with his/her provisional understanding to draft a meta-narrative in the form of a dissertation or research paper(s). This meta-narrative acts to explain to readers/interpreters not only the need for deeper understanding of the phenomenon, but also articulates the researcher's 'pre-understanding' in terms of theoretical concepts, propositions, hypotheses etc. Furthermore, it describes how the 'circle of understanding' was negotiated (in terms of research approach, method and techniques), and articulates the researcher's understanding of the phenomenon in the narrative that is the study's research findings. These observations on the role of narrative echo a similar point made by Rennie and Fergus (2007, p. 497) who argue that "the truth claims made by users of the [Grounded Theory] method resolve to a form of demonstrative rhetoric (as opposed to rhetoric used for mere sophistry)." Thus, in interpretivist studies (and Grounded Theorists that proclaim themselves as such) narrative (or rhetoric) is used to demonstrate correlative relations between categories (and concepts)—it is therefore through the construction of narrative that theory will be grounded in the data.

On the Role and Constitution of Theory in Interpretivist Research

Researchers in the social sciences will, according to Gadamer (1975, pp. 4-5) take one of two basic positions: the first is "concerned with establishing similarities, regularities and conformities to law which would make it possible to predict individual phenomena and processes": in the second, researchers will "not endeavor to grasp the concrete phenomenon as an instance of a universal rule. The individual case does not serve only to confirm a law from which practical predictions can be made. Its ideal is to understand the phenomenon in its unique and historical concreteness…to understand how this man, this people, or this state is what it has become, or more generally, how it happened that it is so." The former concept accords with positivist views, while the second aligns with the interpretive understanding. It is clear from this that interpretivists do not operate in the realm of positivist theoretical generalisation; rather, they aspire to transferability of findings (Lincoln and Guba 1985). We argue that Gadamer's tight distinction does not rule out the formulation of theory, per se, it merely restricts the scope of the theory and its application. Based on weak evidence, Urquhart and Fernández (2006) speak of the potential for the Grounded Theory Method go beyond micro-level theory to meso-level or substantive theory and macro-level or substantive theory. Urquart et al. (2010, p. 378) echo this and provide three exemplar IS research in the use of the Grounded Theory Method and argue that "Orlikowski (1993) remains the high-water mark for theorizing in information systems using grounded theory" However, if this is the 'high-water' mark of Grounded Theory in IS research then Bryant's (2002a, p. 34) comment is curious viz. "one might wonder what makes the study an example of developing a 'grounded theory.'" Apart from the study by Butler (2000) cited herein and which elaborates additional concepts for Orlikowski's (1993) Grounded Theory, we might enquire as to the subsequent fate of this substantive theory. In light of the apparent dearth of subsequent research we now propose possible future directions for the development of Grounded Theory in IS research.

Future Directions for Building Grounded Theory

Following Marquis and Rivard's (2005) paper on the development of theory on organisations and institutions, particularly the failure to develop coherent *formal* theory, we propose that what could and should emerge from rigorous Grounded Theory in IS studies is problem- and mechanism-based, *substantive* 'sometimes-true' theory, whose aim it is to explain rather than predict. In mechanism-based theorising, the proposed theory will not take the form of a universal social law (Hedstrom and Swedberg 1998), rather it will be 'problem-driven' (Davis and

Marquis 2005), and will seek to build mechanism-based explanatory theory (Campbell 2005). The reason for this approach is well-documented in the literature on institutional theory—that is, by focusing on the mechanisms that generate change in social entities, rather than statistical regularities between variables, a foundation for powerful explanations can be established (Hedstrom 2005). None of this is inconsistent with pragmatic phenomenological hermeneutics as the application of method does not have as its goal the development or testing of universal laws or theories with respect to the phenomenon of study. The observed patterns and regularities (e.g. categories) related to social phenomena could be interpreted so as to derive explanatory mechanisms. Thus, as Rennie (2000, p. 484) argues "*any theory coming out of the application of the method is about understanding, not explanation.*" However, we would once again emphasize that the hermeneutical dimension to Grounded Theory, needs to be recovered (Bernstein 1983; cf. Ihde 1990, 1999).

In conclusion, Rennie (2007, p. 18) argues that a "*project of developing a qualitative research metamethodology, entailing methodical hermeneutics, to hold many benefits. It would speak to the ontology of being human. It would uncover and justify an appropriate epistemology. It would provide sanction for rhetoric. It would provide a corrective to the flaws in existing methods, and unite them. It would elevate human science from where it is currently in relation to natural science.*" We believe that phenomenological hermeneutics is best suited to such an undertaking. Thus, we believe that this paper can make a significant contribution to research in the wider social sciences and not just the IS field.

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