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The intersection between systems theory and grounded theory: the emergence of the grounded systems observer

Abstract

The aim of this paper is to outline how a theoretical intersection between systems theory and grounded theory could be articulated. The paper proceeds by marking that the important difference between systems theory and grounded theory is primarily reflected in the distinction between a revision of social theory on the one hand and the generation of theory for the social world on the other. It then explores figures of thought in philosophy that relate closely to aspects of Luhmann's theory of social systems. An effectual intersection, an operational intersection, an intersection based on the concept of primary redundancy and a global/transcendental intersection between systems theory and grounded theory are proposed. The paper then goes on to briefly outline several methodological consequences of the intersection for a grounded systems methodology. It concludes by discussing the sort of knowledge for the social world that is likely to emerge from this mode of observation.

Keywords
Systems theory, Luhmann, grounded systems theory, grounded theory

Introduction

The title of this article, to those familiar with Luhmann's theory of social systems, is paradoxical. Luhmann (1990a) has stated that one of the underpinning ideas of his theory, that of observation and distinction is not intended to "provide a grounding for knowledge, but only to keep open the possibility of observation of operations' being carried out by very different empirical systems – living systems, systems of

consciousness, systems of communication." (Luhmann, 1990a: 78). So why would someone observing Luhmann talk of "grounded systems theory"? What could that mean? The following paper aims to explain this paradox.

The paper itself has emerged out of an empirical study into the meaning of oral health related quality of life (Gregory, Gibson, and Robinson, 2005). In this study an affinity between Luhmann's social systems theory and grounded theory was discovered. The emerging combination of theory and method accounted for the variation and change in "everyday" communications about oral health. The combination of grounded theory and systems theory however demands further observation. The results of this analysis are presented in this paper.

For the researcher new to Luhmann the biggest problem to confront is how to deal with the emerging complex of analytical strategies being deployed in a multitude of communications. These communications are often on directly applied substantive problems such as love (Luhmann, 1986), ecological communication (Luhmann, 1989), risk (Luhmann, 1993) or Political Theory in the Welfare State (Luhmann, 1991). Alternatively, there are other sets of communications aimed at a general analysis of for example The Differentiation of Society (Luhmann, 1982), the Problem of self-reference (Luhmann, 1990b) or the influence of the laws of form on Luhmann's thinking (Baecker, 1999; Luhmann, 1999). Alternatively one can of course begin with Luhmann's own outline of his theory of Social Systems (Luhmann, 1995).

It is not unreasonable to suggest that the variation in paths for discovering Luhmann can lead to variable applications of his work (Andersen, 2003). Approaching his theory from the general perspective of say social differentiation (Luhmann, 1982) may well lead the observer of Luhmann to focus more on system environment differences and on the relationship between structure and time (Luhmann, 1995: 288-89). Other routes into his theory might involve the idea of self-reference and autopoiesis (Luhmann, 1995) or through consideration of the various implications of Spencer's Brown's Laws of Form (Luhmann, 1999; Spencer-Brown, 1969) for his approach to the analysis of social communication (Baecker, 1999). Andersen (Andersen, 2003) outlines five different discursive analytical strategies applicable to Luhmann:

- form analysis, where the unity of communicative distinctions are analysed along with their paradoxes
- systems analysis, looking at the emergence of social systems and their boundary maintenance
- differentiation analysis, here what conditions the emergence of systems and how they differentiate is the subject of analysis
- semantic analysis, where the analysis is based on the condensation of meaning to form pools of distinctions that are then available for systems of communication
- media analysis, where the shaping of various media are analysed and discussed in their potential for organisational formation (adopted from Andersen (Andersen, 2003).

The method being proposed relates closely to both form and semantic analysis. It is therefore not suited to the analysis of media, systems or their differentiation. The

five paths from Luhmann obviously suggest that his analytical strategies have significant potential for the production of a wide variety of sociological analyses. A grounded systems approach is therefore likely to be only one among many.

The variability in readings of Luhmann is further evidenced through some of fruitful applications of his approach for example, Qvortrup's (2003) "Hypercomplex Society". This work aims to substantiate and defends Luhmann's idea of a shift in social order from a theocentric to a polycontextrual society. In the latter form of social semantics the hypothesis is that society can no longer observe itself from a single observational point but rather it must operate with a large number of positions of observation each drawing on various codes for observation (Qvortrup, 2003). There is no centre for society but rather a hypercomplexity of positions of observation. This work contrasts with Fuchs (2001) who sets Luhmann alongside network approaches to communication in an extensive analysis of essentialism. It is likely for a theory so broad and complex that there will be many ways to open it to empirical application. As a result this paper will make no claim to any exclusive rights on Luhmann.

The constructivism of Luhmann marks a shift from structural functionalism (e.g. Parsons) to a functional structuralism (King and Thornhill, 2003). In his scheme the contingent use of function contrasts directly with traditional functionalism wherein social norms and institutions were explained by their beneficial effects on the reproduction and survival of society. Luhmann's systems are primarily communication systems that do not evolve in any purposeful or rational way and indeed may or may not become functional (King and Thornhill, ibidem). The functional structural turn in his theory leads to the centrality of contingency and "emergence".

His approach, embracing contingency as it does, is unusual amongst the particular group of theories associated with attempts to understand the changing nature of society as a process of social differentiation (Alexander and Colomy, 1990). It is well known that this group of theories has continually struggled with the problem of producing very general and abstract theory. This is particularly the problem with aspects of Luhmann's theory of social systems which itself often appears "remote from the traditional settings" of sociological theorising thus furthering the "scepticism of those who feel that its 'entry rights' to social theory are prohibitively high" (Clam, 2000).

These problems in systems theory contrast sharply with debates concerning the grounded theory method (Charmaz, 1995; Clarke, 2003; Dey, 1999; Dey, 2004; Glaser, 1978; Glaser, 1992). There have been a series of papers that have criticised grounded theory for not specifying its theoretical "underpinnings". Some of these have made their own suggestions from the soft constructivist approach of Charmaz (2000), critical realism (Downward, Finch, and Ramsay, 2002; Yeung, 1997) and even feminist standpoint epistemologies (Kushner and Morrow, 2003). Others have been more vocal, arguing that grounded theory fails to address more fundamental problems such as the theory laden nature of observation, the nature of categorisation in science (Dey, 1999; 2004) and the problem of reflexivity (Denzin, 1997; Hall and Callery, 2001). The debate has evolved so much that it is now even suggested that there is no such thing as grounded theory but many forms and ways of doing grounded theory (Dey, 2004).

Contrary to this trend, Glaser's communications over the last twelve years have continued to argue for just "doing" grounded theory (Glaser, 1998). This focus has often given his writing a specific tone centered on the operational aspects of the

method and a rejection of the "forms" of grounded theory which have subsequently emerged (Glaser, 1992; 2002; 2004). In his perspective the method should be kept "unpolluted" and free from "preconception" (Glaser, 1992; 1998). The centrality of the distinction between "preconception" and "emergence" indicates that there is something that remains to be said about the method. Often his responses have been met with a kind of exasperation and even bewilderment (Bryant, 2003). Yet it seems quite clear that Glaser (1992) sees grounded theory as a method that in its purest form it should be kept free from all forms of "ontological" pollution. This was his first objection to Strauss (Glaser, ibidem) and continues to be the basis of his objection to others (Glaser, 2002; 2004).

This paper will explore the implications of the argument that grounded theory is "operationally" grounded. If we accept this then we feel that Glaser's notion of grounded theory has some very close affinities with Luhmann's constructivism. We suggest that like systems theory, the grounded theory of Glaser (Glaser 1978; 1992) might be easier understood within a post-ontological tradition. If the roots of Glaser's (Glaser, ibidem) grounded theory requires clarification, and we certainly think it does, it is along these lines.

The intersection involves understanding the important differences between systems theory and grounded theory whilst also articulating some of the key aspects where a link between them could be developed. Systems theory, as a general theory, generates certain expectations about what is observable whilst grounded theory as a method for observing gives directions on how to look at the world. If there is to be a theoretical and practical intersection between systems theory and grounded theory the latter, in essence ought to have operations that fit and work within the expectations generated at the general theoretical level.

The paper draws on Clam's (2000) reflections on the operation in Luhmann. These discussions are useful because they help expose the centrality and simultaneously underdeveloped nature of the operation in his theory. These reflections are central to this paper which is as much in conversation with Clam as it is with Luhmann. Apart from this obvious influence we will also draw on Esposito's analysis of the two sided form of language (Esposito, 1999) and Luhmann's work on constructivism (Luhmann, 1990a). Whilst the argument is restricted to these points of observation it is important to realise that there is no doubt that other points of contact could be developed.

The contrast between social systems theory and grounded theory

Luhmann's social systems theory involves a categorical "radicalization" of systems that are "…'non-real', purely 'actual'… containing nothing and made of nothing but operations" (Clam, 2000: 63). His approach was based on a profound and explicit concern with theory building after the "rupture of the ontological tradition" and "from the beginning his project is very clearly one of a post-metaphysical theory of society" (Clam, 2000: 64; King and Thornhill, 2003; Luhmann, 1990a). In contrast Glaser (1978; 1992; Glaser and Strauss, 1967) has been concerned with providing a method for generating theoretical communications that are firmly rooted *in* and *for* the world. Luhmann's focus involves a categorical revision of social theory whereas Glaser's involves a focus on the generation of theory *for* the social world with minimal reflection on the theoretical status of what it discovers. Within Luhmann's approach the sociological concept of action was faced with sustained criticism for the

assumptions it made about issues related to the identity, internal consistency and "ontological firmness of the acting subject" (Clam, 2000; Luhmann, 1990a). The predominant dependence on the notion of a privileged and dignified actor was rejected in an attempt to break with ontological ways of theorising. This is certainly clear when one looks at his constructivism closely (Luhmann, 1990a). Luhmann had "an acute consciousness of the need for non-metaphysical frameworks for the description and comprehension of 'what is'" (Clam, 2000: 43).

The principal difference between systems theory and grounded theory is related to the difference between an explicit and implicit notion of immanent rationality. Luhmann's perspective took him away from the world aiming to provide a revision of such rationality. Grounded theory on the other hand became disengaged from such concerns becoming very much "engaged" within "the world" of everyday rationality. Both perspectives have a sense that the world is organised. The systems theory of Luhmann, however, is a theory about how that organisation emerges. In this theory the problem is there to be explained; in grounded theory such organisation is there to be discovered. In a very simplistic way therefore the conjunction between systems theory and grounded theory involves understanding their principal difference, based as this is, on the distinction between revision and discovery. Luhmann's social systems theory has been preoccupied with revision. Grounded theory, on the other hand, discovers itself, in the form of grounded theories, at the end of its own operations. "Glaserian" grounded theory has been constantly engaged in order but has singularly failed to provide an explanation for the emergence of that order.

The intersection between systems theory and grounded theory

Whilst the principal difference between systems theory and grounded theory on one level could be articulated as the distinction between revision and discovery, they both share an appreciation of the de-ontologization of the world. For Luhmann this developed into a profound awareness, whereas for Glaser (1978; 1992; 1998; 2002; 2004; and Glaser and Strauss, 1967) it has remained more a kind of intuition. Luhmann's social systems theory and Glaser's grounded theory were written in very different époques of sociological endeavour. Part of the task of comparison therefore involves recognising that both carry some of the intellectual differences associated with the époque within which they were developed.

We would like to suggest that Luhmann's general theory of social systems could have four intersections with the method of grounded theory; an effectual intersection, an operational intersection, an intersection based on the concept of primary redundancy and a global/transcendental intersection. These intersections are significant because on the one hand we have a general theory of social systems which can help guide our expectations of what might emerge when the world is observed and on the other we have the method of grounded theory which explains how to look at this world. If the intersection is found to be potentially fruitful we would like to suggest that it subsequently becomes possible to suggest a revision of grounded theory within the framework of a general theory of social systems.

Distinction and emergence: the effectual intersection

Traditional ontological positions tend to observe through the use of closed unities the use of the term "individual" being a point in case. Categories in such theory operate in an attempt to capture aspects of human experience or social interaction which are then believed to be encapsulated in the form of the definition. Luhmann's approach to theory attempts to supersede such approaches since it is focussed on the centrality of distinctions operating behind communications. The approach developed from the work of Spencer Brown (1969) and also related to the work of Derrida (1982) who uses asymmetrical distinctions with a positive and a negative term. In each distinction the positive side of the distinction is the side which the system recognises and in which the operations of the system occur and becomes known as the "indication". Observation in communication systems always carries the shadow side of the distinction at the heart of the observation and so both moments of observation are "effectuated" in the operation of observing. For example, science as a social system concerns itself with establishing the truth in so doing it cannot avoid also designating that which is false. A distinction is "self-continent" because it "needs nothing more to exist than its moments united in one sole act: effectuation" (Clam 2000: 68). We would like to suggest a link between this notion of effectuation and the intuition of Glaser to "just do".

Whilst "just doing" grounded theory the most basic distinction is the distinction between what is currently marked as theoretical and what is not. Traditionally a grounded theory emerges from "coding" or "marking" of incidents and the constant comparison of "incidents" to further "incidents". Observation occurs by noting down similarities and differences in observations of observations. In other words a statement or observation is marked/indicated and then summarised by a second observation. As observation continues similar incidents might be observed and these are either noted as similar or different. Incidents which are similar do not indicate further variation whereas incidents that are different need to be noted for either indicating variation in existing codes or suggesting the development of new codes. Anything which is not yet coded remains to be integrated into the theory through constant changes in its structure. Therefore the theory is solely justified by the performance of its operations it is through the "effectuation" of its operations that the grounded theory "emerges".

In grounded theory the theoretical structure "emerges" then fades only to re-organise itself during the operations that constitute it. This has already been noted as problematic from the perspective of classical logic (Dey, 1999). Dey (ibidem) takes some time to explore the "elastic" nature of grounded theory categories explaining that perhaps it would be better to see them as fuzzy sets? We would like to suggest that an alternative route to understanding grounded theory can be forged that builds on Luhmann's notion of the operation, based as this is on the marking of asymmetrical differences.

The comparison needs to be qualified. In systems theory systems emerge from the effectuation of an asymmetrical distinction that lies at the heart of indicating in all communication. Whereas we have found that grounded theory is itself "effectuated" and discovered in its own operations. Therefore the focus of systems theory on explaining how systems are effectuated might tell us what to *expect* concerning the relationship between grounded theory communications and their immediate environments. Systems theory could then act as the general theoretical programme within which a modified grounded theoretical approach could be developed. In short, the recommendation is that grounded theory should be observed through Luhmann. The first theoretical intersection at the point of effectuation is closely related to the

next one which involves an understanding of the notion of the form in its adequate manner.

Redundancy and variation: the operational intersection

Amongst the other figures of thought that relate to Luhmann's social systems theory is Aristotle's act theory of the soul. Clam (2000) relates the work of Aristotle to Luhmann's theory of social systems through a discussion of "the realisation of a form in its adequate manner", the:

> metaphor that bears the whole interpretation is that of a whirlpool maintaining the stability of the form through the flow of matter. (p. 72)

The operational intersection involves understanding the difference between the protological and the operational level. The difference is between descriptions of "untemporal, time-inaugural emergence" of things versus concrete events. The empirical world is "a world of cooled out derivatives", contrasting with originatory structures (Clam, 2000: 72). In the "cooled out world", reality cannot comprehend the protological. This might explain the central tension in this paper between an aspect of systems theory, which is formed on the protological level, and the production of grounded theory which itself emerges within the world of cooled out derivatives. The metaphor of a whirlpool is best suited to capturing the circular nature of operations as well as the derivative nature of the resulting "cooled formations". Once again Aristotelian act theory is understood in a de-ontological way because this:

> establishes the problematic on an empirical operative ground and draws on the contingence and (evolutionary) variability of the form as opposed to its supposed incorruptible ideal sameness. (Clam, 2000: 72)

Luhmann's conception of the operation which in turn has "no guarantee of ontological identity and stability" is very similar to this figure of thought (Clam, ibidem). The key question concerns how order is possible at all. The "protological differentialist formulation" of Luhmann in this context would indicate that:

> each difference that scratches the surface of the world tends, from its prime event on to iterate in a way that builds a nucleus for redundancy as well as for variation. Redundancy is the basic variation enabling process, while variation is the marginal one... Each operation, from moment to moment, either confirms further the form, or inflects its wrapping movement and prepares the possible (not necessary) emergence of new forms. (Clam, 2000: 72)

Systems theory, if understood in this way, can equip us with the "expectations" that the outcome of observing would emerge into a world of "cooled out derivatives". Conversely the *process* of *doing* grounded theory would be formed on the basis of the prime event (observation) towards the emergence of a nucleus of redundancy - a communication. On the protological level grounded theory emerges from the "hot" process of observation, resulting in "fixed" forms or categories. In these terms the marking of categories enables the process to see further variation, which can in turn be fixed in further categories and so on. Variation is therefore determined by, and marginal to, the process of categorisation. As observations are performed they either

tend towards further redundancy or result in fundamental shifts in the theoretical structure. The result is a theory that "captures" greater and greater variation in terms of it's own redundancy. The "elastic" nature of categorisation in grounded theory has already been recognised as deeply dissatisfying within the ontological tradition (Dey, 1999). The theoretical intersection with systems theory would suggest that this should be "expected". We would expect categories in the grounded theory process to reproduce order, generate redundancy and allow for variation.

In our study everyday forms of communication about oral health were observed to have settled around the distinction concerning whether oral health was relevant or not (Gregory, Gibson, and Robinson, 2005). In the "whirlpool" of communications we discovered other forms for example there were communications that were associated with distinguishing between natural and unnatural oral health. This distinction emerged when pictures of different smiles from the "Hollywood" smile to those which were close to the grotesque were introduced into the conversation. These stimulations can be said to have resulted in observations about the authenticity of the smile based as this is on the form of natural/unnatural. Nonetheless no matter what secondary form emerged (there were seven in all) each of the communications in the conversation would eventually return to the relevance of authenticity for the observer.

Our analysis was based on marking the indications in the conversation and then looking for the other side of the distinction either within one conversation or in other conversations. The distinctions were interchangeable a designation that is very close to that indicated by Glaser (1978; 1992; 1998). The distinctions that emerged generated considerable redundancy i.e. they could be seen readily in all communications that followed. What was also interesting was that there was also tremendous variability in how they could be deployed in conversations.

The operational intersection can also be explained by returning to the differences in systems theory and grounded theory. Fundamental to Luhmann's systems theoretical explanation is an understanding of operations as the basis for "flowing process with no real anchoring in things. A structure reflects just the temporary redundancy tendencies of operations, with 'enslaving' effects upon certain operative sequences" (Clam, 2000: 73). As we have seen, an appreciation of the operations in grounded theory indicates just how redundancy generates variation and at the same time how communicative structure emerges out of observation. This intersection links closely to the next one. In Luhmann structures emerge as a result of operations building greater and greater redundancy so that a kind of primary redundancy is expected to emerge. In Luhmann this is characterised through the expectation of the "primary distinction", a theoretical term that can be correlated with the notion of the core category in grounded theory.

Primary distinction and core category: the intersection of primary redundancy

Before beginning reflections on the status of the primary distinction and the core category it is necessary to reflect that the grounded theoretical notion of core category still contains much of the language and rationality of its époque. The core category is generated on the claim that the writer understands the main concerns of those being observed. This would no longer be appropriate within a truly post ontological tradition. The category in the classical way acts as a kind of container or hold-all concept and this is more appropriate to a time when the structure of things was believed to contain its object. It might be necessary to drop the theoretical notion of the category which might lead back to the sorts of problems that Dey (1999)

has explained in some detail. Our suggestion therefore would be to replace the notion of the core category with the idea of the primary distinction.

In the previous section the centrality of the operation suggests that communication forms will condensate towards a primary distinction (Clam, 2000). The closer communications are to the primary distinction the more redundant they will be. This contrasts with the drawing of distinctions in the primary stages of observing when the iteration process is said to be more "hasty". We have suggested the iterations of grounded theory produce redundancy and variation in the emergent communication. Condensation is achieved through the emergence or development of a core category and a fixed theoretical structure. This occurs through "theoretical saturation" on the one hand and a formalisation of the structure of the core category through the use of "theoretical coding families" on the other (Glaser, 1978). Theoretical saturation is nothing more than the marking of the redundancy of observations where the emerging communication anticipates what will be observed if further observations occur in the area under question. Theoretical coding families include for example, the mainline family which involved categories such as social control, recruitment, socialization, stratification and social mobility etc. (Glaser 1978). These categories were developed from a summary of common theoretical codes available within the immediate environment of grounded theory at the time. In a sense this was the way that grounded theory had incorporated the "cooled out derivatives" of sociological theory into its own operations and so was directly connected to its communicative context. If any methodological schema is to emerge from the intersection of systems theory with grounded theory, it is suggested that categories would have to be copied into the revised method by uncovering the distinctions and operations they involve. Once again the general theory can help to explain aspects of a new methodology aimed at fitting and working within its structure.

To illustrate this point if one looks at Glaser's presentation of the theoretical coding families you can see that there are sub forms of codes each placed under a thematic categorical heading (Glaser, 1978). In theoretical sensitivity the themes are a heuristic rather than a rigorous and exhaustive ordering of all the codes that can be used. Take the "identity-self" category which is said to "contain" the following: self-image, self-concept, self-worth, self-evaluation, identity, social worth, self-realisation, transformation of self, conversions of identity. If you look at these from the perspective of systems theory clearly the category can be reformulated around the distinction between what is or isn't self. A grounded systematic theory about self identity would therefore concern itself with articulating how everyday communications around the form of what is or isn't self. The reformulation of the method into a grounded systematic framework would equip the researcher with the expectation that communications about self identity may well turn around the distinction between self image or no self image, worth or no self worth. Self worth could be further subdivided into the distinction between social and personal self worth. Self realisation would become the form of re-entry of the self into itself and the transformation of the self could perhaps be analyzed as possibly the symbolic medium of self identity. If the core form of communication in an area revolves around the distinction between self and identity then the interplay of each of these forms of communication would be expected to emerge in conversations about the self.

In addition to this one of the puzzling aspects of grounded theory from a traditional research perspective has been its insistence that a theory emerges most efficiently when preconceptions are either held in check or avoided altogether (Glaser, 1978; 1998; Glaser and Strauss, 1967). Glaser has often argued that the

novice researcher is the one best suited to doing grounded theory because their observation processes are not already "formed". In some respects Luhmann's theory of observation can help explain why such guidance might be worthwhile. In systems theory (system) identity emerges better under the conditions of an undifferentiated environment. Therefore the "difference system-environment within the system is stronger, and enhances the building of self-identity, when the environment is not already so differentiated as to impose internal complexification of the system through the differentiation of diverse roles and functions within the latter" (Clam, 2000: 73). Therefore when the environment within which the communication is being developed is highly differentiated the communication risks becoming structured by distinctions from sources not directly relevant for the building of the communication. This is known as "forcing" in Glaser's perspective (Glaser, 1992).

The problem is that the defence of Glaser's approach has always been on the basis of experience and the urge to "just do!" (Glaser, 1998). By bringing Luhmann to Glaser this approach can be justified through the use of the theory of observation where an indication iteratively implies a distinction which in turn can be recognised and re-entered (Luhmann, 1990a; 1990b). Forcing this iterative process of observation along pre-conceived distinctions only serves to replicate those distinctions within the form of what is being observed.

Take the example of a student who is looking at the impact of a chronic condition on quality of life if they have read some persuasive articles that discuss "coping" with chronic illness they might be "forced" to take account of the term "coping" by "reading it into" what they are observing. In the end all that has happened is that the form of observation coping/not coping has been replicated the indications and by designation the distinctions that are being deployed in the communication are ignored in favour of those already accepted in the "scientific" literature. This is not to say that the "scientific" literature is not relevant. To the contrary it is essential to observe the distinction and indication that are being made here too but as Luhmann states the most important thing is to specify the system of observation (Luhmann, 1995). This does not imply that observers do not have preconceptions Glaser or Luhmann would not say this. What it means is that care should be taken when observing to specify just what is being observed and from which direction.

A theoretical intersection on the basis of the notion of the primary redundancy is fundamental to the relationship between systems theory and grounded theory. The first central correlate is that between the core distinction and the core category. The second is the importance of the system-environment difference where the former emerges more strongly, the less the latter is differentiated.

Systems theory and grounded theory: a global/transcendental intersection

Luhmann's dependence on Brownian methods of observation made more acute questions about the status of his theory. Questions about the level at which his theory was pitched were deemed most pressing, the problem being that it often reached a kind of "transcendental *a priori*" (Clam, 2000: 68). This, Clam volunteers, was because Brown's logical calculus is a kind of protologic. Meaning:

> an inquiry into the pre-discursive laws emerging with the most elementary position of 'something'. These laws must be situated at a level preceding the level of expression grasped by classical logic. Protologic denotes, thus, in our context, the logic implied in the most general act of appearance or

> position of a something (a form). It reveals 'our internal knowledge of the structure of the world' [Laws of Form 1969: xiii]. (Clam, 2000: 69)

As reference to Brown's protologic became more dominant, the late theory in particular became an "observation" theory. By drawing on Fichte Clam (2000) has indicated that the main problem with theorising on this level is to try and think from a position before experience, in a "transcendental" without objective firmness. Clam returns to this figure of thought through a qualified exploration of the relevance of Heidegger's doctrine of pure event (*Ereignis*).

> The achieving piece of Nur-Vollzug thought is the reflection of an aspect of reality which hints towards a horizon that out-ranges, and in a way engulfs the horizon of all- and self-engulfing communication.
> The world problem of world event is, however, like everything having sense, a potential object of social communication. (Clam, 2000: 75)

The grounded theory method hints that such figures of thought might well be instructive when it uses the, albeit époqually flavoured, stipulation, that "all is data" (Glaser, 1998). According to Glaser (1978; 1992; 1998) grounded theory categories emerge from the analysis of data. This has resulted in claims that grounded theory is positivist or post positivist (Denzin and Lincoln, 2000) even if others see this as a kind of false problem (Dey, 2004). A more appropriate or at least potentially more useful term might be that "all is observable". Therefore everything is potentially the subject of a grounded theory communication. The method might then be seen to reach out to the sort of global understanding of systems theory. What we know, however, is that this view of communication is also self limiting. Not everything is communicable or indeed observable and "a whole stream of non communication is thus co-current to that of communication" (Clam, 2000: 75) and that such communications cannot attain to be the largest "horizon of being" (Clam, ibidem). Grounded theory and systems theory therefore have to "fracture" the world in order to make it communicable.

In conclusion, Clam's (ibidem) reflections on a qualified relevance of Fichte to Luhmann can also be used to illuminate the philosophical territory where Glaser's (1978; 1992) central intuition of the emergence of grounded theory might lie. Glaser has never explained why theory emerges other than to assert (in a characteristically circular way) to "just do". His assertions lack objective firmness and we would like to suggest that his insistence on emergence without preconception places his version of grounded theory within a kind of transcendental tradition[i]. His method for generating theoretical communications is very similar to the position adopted by Luhmann to account for the emergence of social communications. These reflections prepare the way for an outline of just some of the main methodological consequences of such an intersection.

Consequences – the emergence of a grounded systems methodology?

Systems theory and grounded theory are both products of their time. A consequence of the engaged nature of grounded theory has been that it has not considered the social (communicative) status of its observations, which often give the appearance of being more "social" than "sociological". By this we mean that grounded theory has become so immersed within various professional fields of

enquiry that it has become more and more disengaged from the sociological enterprise. With the advent of Luhmann's form of systems theory we feel that there is now available a general sociological theory that would be sensitive to the operations at the heart of Glaser's form of grounded theory. Grounded theory could be refined within the sociological framework of systems theory and simultaneously a path back into the sociological endeavour might be developed. Grounded theory should remain socially engaged, that is its strength. In conjunction with this our aim has been to assess the degree to which a combination between systems theory and grounded theory can generate knowledge *for* the social world.

We are deeply sensitive to the fact that the theoretical conjunction suggested here might be asking a lot of those doing grounded theory. It is because of this that an alternative methodology is proposed. This approach would involve outlining the notion of "grounded systems observing" and the products generated might then be termed "grounded systems theory" (Gregory, Gibson, and Robinson, 2005). We would like to also suggest that the term "grounded systems theory" further doubles the original paradox since there will be considerable resistance from grounded theory to be "grounded" in anything else other than data and its own operations.

The theoretical context suggests that any proposed methodology must reflect the relation between the method, theory and its complex social communicative environment. It is erroneous to see a system as a unity containing itself. Rather, order is itself an actual difference which is often confused as a boundary. The central point is that order reflects a complex actual relation (Clam, 2000). Grounded systems observations might contribute to the systems they are supposed to be studying through the production of "condensated" communications. The implication is that at one level the production of knowledge *for* the social world involves the generation of "a difference that makes a difference" (Bateson, 2000: 272). To some extent this involves the generation of communications that become copied into various social systems as part of their internal environments. These communications can be meaningful and informative because they communicate something rather than nothing and because they reduce the complexity of communications in the environment of systems to core forms. The grounded systems methodology proposed here might improve the possibility of achieving this since it would be based on and guided by the general theory of social systems. At the same time it would also be aimed at providing practical guidelines on how to explore "complex rationality" in it's "variety of forms" (Clam, 2000: 66).

The production of communications centred on core forms can fit and work within a programme of research suggested as a consequence of the theory of social systems. What is more problematic, is predicting the impact of such communications. As such the method is only going to be able to provide communications of the first, second and perhaps third order. The approach suggested would only cover a small part of the implementation of a theory that has complex and wide ranging implications. Therefore other approaches will have to be developed for an in depth exploration of systems theory.

For example, the suggested methodology might be coupled with a further methodological programme aimed at the observation of such forms at different communicative levels (Leydesdorff, 2003). Before this can be adequately addressed the notion of coupling needs to be discussed in more detail.

For Luhmann the problem of coupling is generally seen as the contribution of one autopoietic system to another. This occurs when differences in one system enters another without breaking the unity of the effectuation. So conscious material

does not enter communication materially but both consciousness and cerebral life are actuated in communication (Clam, 2000). Luhmann sees the absorption of one actualisation in the other through contribution and stimulation. An actualisation such as consciousness for example, does not imply the realisation of communication, since consciousness is not communication. Not all conscious syntheses enter communicative ones and the transformation of internal experience into communication is not automatic. In other words systemic coupling is unequal and selective, the best examples of this are given in Ecological Communication (Luhmann, 1989). When this occurs the conscious material has ceased to operate as consciousness and has moved to the operative synthesis of communication (Clam, 2000). The configuration of the conscious experience of communication during its own operation is described as a case of simultaneous effectuation (Vollzug). Communication is therefore continuously "underwritten" by consciousness. The implication of this for grounded systems theory are that communications formed through this methodology cannot be said to be located within an all thinking, all seeing and powerful rational actor. Rather, the observation processes would be subject to a range of communicative contingencies. The expectation should therefore be that grounded systems theory should be expected to vary in relation to the consciousness/environment relationships "underwriting" the performance of its operations.

There has been very little reflexive consideration of the processes affecting the generation of grounded theory communications. Such work would certainly help inform methodological expectations for an emerging grounded systems theory. One problem might relate to linguistic contexts. Grounded theory nominalisations are often use active aspects of gerunds (Wik, 1973), this form of nominalisation is not available in some languages. As yet there is very little in the way of a comparative appreciation of how language contexts can impact on the operations that form the method (Barnes 1996). From the general framework of systems theory such work would be justified on the basis of the expectation of contingency. Coupled with this is the expectation that there may be third order constraints on the emergence of grounded systems communications (The work of Strydom, 1999 with respect to Habermas is of interest here). The result would be an appreciation of the stimulus of social systems in the immediate environment of the consciousness underwriting the operations of the method.

Luhmann has overseen the shift from the idea of a system as a unity to a differential view of the system. In this perspective the unit of order "is that of an asymmetrically reflected difference order/non-order" (Clam, 2000). The resulting configuration is not unprecedented but as Clam (ibidem) has stated is part of a special theoretical tradition from Aristotle to Heidegger. The appearance of these figures is always associated with attempts to think against habits of intuitive thought. For its part, the use of a grounded systems theoretical approach would enable the emergence of communications that are condensated into core forms and generated out of observations of everyday conversations. One of the key things we are implying then is that since people are part of the immediate environment of communication systems it would be appropriate to consider methods for generating systems theoretical communications that are more directly coupled with this environment. We feel that a fully developed grounded systems methodology might be appropriate for this.

This paper has outlined two principal aspects of a grounded systems approach through reflection on Clam's (ibidem) insightful discussion of Luhmann and through a working knowledge of Luhmann's constructivism (Luhmann, 1990a). Other work on

the theory of observation is also important. For example, Esposito (1999) discusses two-sided forms in language and their relationship to the processes of observation. These reflections can illustrate the complexity of the proposed method. Esposito (1999) begins with an explanation of the autopoiesis of observation:

> Each operation distinguishes something to which it refers, yet at the same time it generates the distinction between the operating system and that to which the system refers. These two systems are not congruent: The distinction between the object indicated in each case and that from which it is distinguished does not match the one between the operation of the system and that which is external to the operation. We shall address the latter as the self-reference / external reference distinction(s/e), in contrast to the distinction indication / distinction (i/d) that guides the operation. (p. 80)

The operation is circular but exists on two simultaneous levels; "a distinction is a case of self reference (distinctions can only occur in a system); an indication is a form of external reference (the indicated operations do not coincide with the ongoing operation)" (Esposito, 1999: 80). These reflections have important consequences for grounded systems theory and can help add to the understanding of the complexity of the relationship between "open" and "theoretical" coding in grounded theory. In traditional grounded theory open coding is the process whereby the person doing grounded theory generates "substantive codes", that is words that can be used to refer to groups of similar incidents. Bringing the observations of Esposito on the autopoiesis of observation to this process involves interpreting open coding as the marking of "incidents" by making "indications".

Marking "indications" would then be seen as a form of external reference and involves evoking the i/d distinction (Esposito, 1999). Since observing also simultaneously effectuates the orthogonally related s/e distinction the observer is also marking what is theory and what is environment. In this respect the process of observation forces the emerging communication to take command of the indications that people make and demands that these be copied into the emerging communication.

In classical grounded theory "theoretical coding" focuses the researcher on the internal structure of the emerging communication and this in turn means focussing on the s/e distinction. As a consequence the i/d distinction becomes implicit. Yet if we follow the autopoiesis of observation this would mean that such operations coding would unavoidability adjust the external referencing of the emerging theory. The idea that the categories generated during the process of doing grounded theory where peculiar and in some ways "elastic" has already been problematised (Dey, 1999: 89) and the suggestion is that an understanding of the autopoietic nature of observation can help to explain why this is the case. Categories are fuzzy simply because observation operates simultaneously on two different levels and it is not possible to observe each at the same time. Moving from the i / d to the s / e level involves time and a shift in communicative focus, and it is perhaps for this reason that in classic grounded theory both operations where named as separate stages in a process of theory building (Glaser, 1978; Glaser and Strauss, 1967).

We feel that a working knowledge of Esposito's (1999) thoughts can help to explain the complexity of a purely observational method. What is more the complexity of this form of rationality can be clearly understood when one has a working knowledge of these reflections. In grounded theory both substantive and theoretical "coding" are autopoietically related and simultaneously effectuated.

Whilst in the past they might have been seen as two discrete components of a method, separated by time. They are nonetheless intricately connected to each other and their relationship is unavoidable. For grounded systems observing an appreciation of how the autopoiesis of observation involves a reflexive awareness of how observation "wounds the world", takes possession of it (the i / d distinction) and on the other hand how this form of observation would also involves instances of self-reference and other reference (the s / e distinction). It is within the instantiation of self reference that the grounded systems observer emerges.

Conclusions

"Grounded systems theory" is inherently paradoxical. Clearly Luhmann (1990a) was holding out his theory of observation so that it could be broadly applied. It is nonetheless necessary to open this innovative theoretical design to the sorts of territory that sociology has traditionally studied. We do not aim to transform Luhmann rather we aim to transform traditional approaches in sociology by bringing Luhmann to bear on what is the traditional stall of much of sociology. We suggest that by taking possession of grounded theory procedures and techniques systems theory can be deployed to study the world of everyday communication. If we return to Andersen's (2003) outline of Luhmann's different discursive analytical strategies we would suggest that the method should be able to uncover the various forms of meaning in everyday communications alongside an analysis of everyday social semantics.

We must be clear that such studies could in no way claim any special validity within a Luhmannian approach to the study of social systems. But rather such studies should serve as points of departure to a more extensive analysis of how various social systems communicate about these everyday themes. For example, to conclude previous work looking at the everyday form of communications about oral health related quality of life (Gregory, Gibson, and Robinson, 2005) it is suggested that we now move to analyse how communication about quality of life has been thematised as a programme in medical and dental science. One of the interesting questions to be asked is if the same theme of relevance will emerge?

We began with a very loose coupling between grounded theory and systems theory. Our reflections take us toward a more meaningful appreciation of the potential connection between these two traditions. Before we could explore a closer theoretical intersection between systems theory and grounded theory we had to outline that some important differences do exist.

Whilst the general and abstract nature of Luhmann's theoretical structure is now well known, what is less frequently identified is that Glaser's form of grounded theory is becoming increasingly disengaged from the sociological enterprise. We hope to have indicated that a link between sociology and grounded theory can indeed be maintained. We are acutely aware that the methodology would certainly not be the only one suggested by Luhmann's social systems theory. Nevertheless it does seem worthwhile to us that the proposed methodology to help guide the production of communications centred on core forms and this endeavour would fit and work within social systems theory. A problem nevertheless remains concerning the status of such communications.

The dissolution of the distinction between systems theory and grounded theory can produce theoretically guided modes of observing of imminent and transient

information about patterns of everyday communication. It is imperative that systems theory engages with the immediate environment of "hot" communication; the traditional stall of sociological communication. This will invariably involve the development of methodologies that can help in the observation of interaction systems and a deeper appreciation of traditional methods from a Luhmann perspective. The challenge for systems theory is to discover just how patterned such communications are. The one thing that grounded theory can teach us is that core redundancies can and do emerge relatively quickly. Indeed the products of this mode of observation often do produce "differences that make a difference" (Bateson, 2000: 272). We therefore speculate that the unmarked side of the distinction between grounded theory and systems theory might involve the emergence of the grounded systems observer. As we have seen, such an observer might be able to describe the nature of the complex rationality in many forms and in doing so might be seen to produce knowledge *for* the social world.

Endnotes

i Note in this respect we agree with Dey that there is a kind of idealism here.

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