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COMPLEXITY AND THE GROUP MATRIX

by Ralph Stacey

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Abstract

This paper explores the potential that the natural sciences of complexity may have to offer analogies and insights with regard to communicative processes in a group and the concept of the group matrix. The paper briefly reviews Foulkes' last formulation of the concept of the group matrix. It then draws on Mead's thought on mind, self and society, and on some analogies from the complexity sciences, to suggest a formulation of the emergence of mind in communicative interaction in a group.

In his last paper on the group matrix, Foulkes (1973) says of a group-analytic group:

What an enormous complexity of processes and actions and interactions play between even two or three of these people, or these people and myself, or between two in relation to another three, and so on. What enormous complexity, quite impossible to perceive and disentangle even theoretically all at the same time. How is it that they can nevertheless understand each other, that they can to some extent refer to a shared common sense of what is going on? (1973, p227)

His answer to this question is 'the existence of a suprapersonal matrix' (1973, p227). He sees this as an alterative to the view that what is happening in a group is due to the interaction of individual minds. He makes it clear (1973, p226) that he is talking about a psychic system, one of interacting mental processes, not individuals interacting to form a superimposed social system.

Communication and the group matrix as suprapersonal psychic system

According to Foulkes, when people come together in a group they create a new phenomenon, a suprapersonal psychic system, which Foulkes describes in a number of different ways as: the context of the group, that is, the background in which the individual is figural (1973, p230); a total unified field of mental happenings of which the individual is a part (1971, p214); transpersonal processes that go right through individuals like X Rays, but which those individuals can modify, elaborate and contribute to in their own way (1973, p229); interacting mental processes that transgress the individual (1973, p229). By mental processes, he seems to mean communications such as 'acts, active messages, movements, expressions, silent transmissions of moods ...' (1973, p213) both conscious and unconscious. In the latter category he includes resonance, transference, projection, and so on.

Although earlier he had talked about the matrix as a group mind, in his last paper on the matrix he rejected that terminology and talked about 'the mind' as interacting transpersonal mental process, or 'mind' as a multiperson phenomenon (1971, p225). As I understand it, he is saying that an individual mind is the transpersonal processes that penetrate him or her through and through to the core so that individual mind is a multiperson phenomenon. This dynamic formulation begins to suggest a view of causality in which interaction is perpetually constructing the future when in their coming together people create the new phenomena of

suprapersonal psychic systems. This conceptualisation of mind is surely a significant departure from classical psychoanalytic formulations in which mind is located in the individual. Foulkes' view had its critics (for example, van der Kleij, 1982) who felt that it either removed the individual altogether or presented a picture removed from the ordinary experience of individuality.

However, Foulkes repeatedly argued that he was not removing or reducing the individual because, as I understand it, part of the psychic suprasystem consists of the foundation matrix that individuals bring with them to the group. In my view, this development of his argument takes him right back to locating the mind in the individual in the way that classical psychoanalytic theory does. My argument here is essentially the same as Dalal's (1998) broader analysis of Foulkes' thought. To see what I mean, consider the steps in Foulkes' argument. First, he defines the nature of the suprapersonal psychic system as follows:

..... I have accepted from the beginning that even this group of total strangers, being of the same species and more narrowly of the same culture, share a fundamental, mental matrix (*foundation matrix*). To this their closer acquaintance and their intimate exchanges add consistently, so that they also form a current, ever-moving, ever-developing *dynamic matrix*. (1973 p228)

This pre-existing and relatively static part we call the 'foundation matrix'. On top of this there are various levels of communication which are increasingly dynamic. They develop under our eyes. This is called the 'dynamic matrix'. (1971 p213)

He makes it clear that the various levels of matrix in the suprasystem operate at the same time in various admixtures but says that for reasons of clarity one can distinguish between the

...... relatively static and unalterable genetic foundation matrix and the rest, which is, to a greater or lesser extent, subject to change within the group-analytic group. (1971, p213).

Of course, the foundation matrix changes through biological and cultural evolution but such evolution takes a long time. It seems clear to me from these quotes, that as far as a specific group-analytic group is concerned, the theory postulates a suprapersonal psychic system having stable, static aspects and dynamic ever-changing ones, to be thought of as intertwined with each other as interacting mental processes. However, there has been an important shift in the argument in the way in which the relatively static processes called the foundation matrix are linked to genetics. Foulkes confirms this shift when he says that mental processes cannot interact per se because it is ultimately whole persons who interact with whole persons:

What I mean by saying that mental processes interact is the selective interaction that goes on impersonally, instinctively, intuitively, basically unconsciously, in accordance with the inner constellation and

predispositions of those concerned and which determine their interaction. The total interactions of the individuals are in fact the result of affinities or disaffinities of individual instincts, emotions, reactions of all sorts, character predispositions, for example. There is at the same time an unconscious interpretation of these reactions on the same basis. (1973, p228-9)

.... The individual's behaviour has been decisively shaped by the original family group. (1973, p231)

Through the notion of the foundation matrix, Foulkes has brought the individual back to the central position because now mental processes interact in a way determined by instincts, predispositions and inner constellations and decisively shaped by early family life. This determination and decisive shaping clearly refers to the individual mind. Instincts, predispositions, and so on, constitute causative factors operative before the individual comes to a group to create the new phenomenon of the suprapersonal psychic system. In fact, if their minds are determined and decisively shaped in the way just described, what is the causative role of this newly created suprasystem of transpersonal processes that pass through individuals? The argument has moved from a dynamic multiperson interactive process in the living present that is potentially constructing the future to one in which the future is the unfolding of individually enfolded instincts, predispositions and unconscious inner constellations. How these two are to be understood as processes in one newly constructed suprasystem is far from clear. Despite Foulkes' insistence that the notion of the individual is retained, it is retained in what seems to me to be unconvincing ways, either as transpersonal processes passing through an individual, or as the unfolding of instinctual and culturally determined behaviour, or by both in some way not made clear.

For me, the notions of a psychic suprasystem, on the one hand, and the foundations of inherited instincts and early predispositions, on the other, are two mutually inconsistent explanations in a number of ways. One privileges the group as a psychic system transgressing the individuals and the other privileges the genetically / culturally determined individuals as constructing the group. One implies transformative causality in which the future is being constructed in the living present while the other implies a formative causality in which the future is unfolded from what is already there. One emphasises the possibility of the unknown and the other the likelihood of the known.

However, in his insistence that the total psychic suprasystem must be understood as one intertwined system consisting of foundation and dynamic matrices, Foulkes ends up with a 'both / and' explanation. On the one hand, there is the dynamic matrix understood as a jointly created suprasystem, above or across individuals, penetrating or transgressing them as their minds. This is a multipersonal phenomenon and thus a notion very different to classical psychoanalytic theory. On the other hand, there is the foundation matrix, suggesting something below or before individuals, which is explained in terms of biological determinism and decisive shaping by early family experience, fully in accord with classical psychoanalytic theory of mind as a single person phenomenon. Foulkes does not choose between these explanations but quite explicitly states his 'both / and' position (pp227, 230-1).

He argues that, against the background of the total field, one can focus on the group as a whole or on the individual, in which latter case psychoanalytic formulations apply. It all depends upon what one wishes to observe. He sees both as abstractions in terms of figure (group, individual) and ground (total field or psychic suprasystem) and regards both as being true from the position from which the observation is made. However, he does express a preference for the multiperson view of mind (p1973, p227).

For me, this is an unsatisfactory position that diminishes Foulkes' important insight about the centrality of relating and communicating between people in understanding the nature of the group and the individual. It also diminishes his insights about the arbitrariness of defining some processes as inside the individual and others as outside. Simply accepting both positions, it seems to me, is an easy way out of having to live with the paradox of the individual and the group. Foulkes' explanation provides the relief of retaining two contradictory theories by looking at them sequentially, keeping one for one purpose and one for another. In so doing, the theory loses the dialectic, the paradox of groups and individuals simultaneously forming and being formed by each in communicative processes. A similar point was made by Van der Kleij (1982), who also criticised the conceptualisation of individuals as nodes in a matrix, through whom transpersonal processes passed. He proposed a 'dialectical' formulation in which attention moves back and forth between individual and group, which in the end is not much different to Foulkes because it too is a 'both /and' sequence rather than the paradox, or dialectic, of behaviour as simultaneously individual and group.

I want to suggest a way of understanding the relationship between individual and group not in terms of systems above or below people but as processes of a paradoxical nature in which, in their communicative interaction, individuals form groups and are formed by them simultaneously. I want to suggest that this approach might be a way to develop Foulkes' important insight on the centrality of communication in a way that focuses on the communicative interaction between individuals rather than the interaction between mental processes in a psychic suprasystem. The approach I am suggesting draws on the thought of Mead about mind, self and society and upon some analogies provided by the natural sciences of complexity.

Mead on Mind, Self and Society

Mead (1934) argued that all social animals communicate with each other through a conversation of gestures: movement, touch, sound, visual display and odour. Each gesture by one animal calls forth a response from another and together, gesture and response constitute a social act, that is, an act that is meaningful to those gesturing and responding. This is what the social, in general terms means to him: responsive processes in which animals communicate meaningfully with each in a continuous cycle of cooperative interaction with each other.

However, although there is meaning in such a process, there may be no mind or consciousness. Mind is a process in which a gesture can call forth the same bodily response in the one making it as in the one to whom it is made. It is only through the capacity that the one making a gesture has to call forth in him / herself a

similar attitude to that being called forth in the other, that the maker of a gesture can be aware of what it means. For example, this capacity enables one to be aware that the gesture of shouting at someone may arouse fear or anger in that someone. That awareness is possible because the gesture of shouting arouses the potential of fear or anger in oneself. Such a gesture is what Mead called a significant symbol. It is significant because it means the same thing, in a bodily sense, to the maker of the gesture and to the recipient.

Mead, like Foulkes, is concerned with the nature of communication in a group but his formulation suggests another answer to the question posed by Foulkes in the quotation at the beginning of this paper: how is it that strangers coming together in a group can immediately understand each other? Foulkes' answer is the foundation matrix but Mead's is the biological capacity to call forth in oneself a similar attitude to one's gesture as that called forth in the other. The role of the biological here is completely different. Biology is not acting as a causal determinant in the form of instinct but as a capacity, namely, the capacity to relate to others in a particular way. Instead of having to posit the existence of a psychic suprasystem it is enough that humans have central nervous systems enabling them to communicate in significant symbols. This is an explanation based on experience-near communicative interaction, not on an hypothesised psychic system above, across, beneath or behind those communicating.

For Mead, the elaboration of vocal gestures into language enables a more sophisticated development of mind. Language enables the maker of a gesture to be aware, in advance, of the likely response of the recipient and it enables the maker of the gesture to signal to the recipient how the act is likely to unfold. The maker of the gesture is, thus, conscious and can think, that is, hypothesise likely responses to a gesture in a kind of role-play. To have a mind means to be aware of the possible consequences of actions, as those actions emerge, by means of silently conducted conversations in the pauses between gestures and responses. Mind is silent, private role-playing of gesture-response conducted during the vocal, public interaction of gesture-response that is social cooperation (for similar views see Elias, 1970, 1989; Bhaktin, 1962; Vygotsky, 1986). This is a view of individuals in relationship continuously evoking and provoking responses in each other, responses that each paradoxically also selects and chooses on the basis of their previous histories of interaction. The private, silent conversation of a body with itself is the same process as public, vocal conversation between bodies and in this sense mind is always a social process even though it is an individual conducting the private silent conversation. This is, an experience-near interpretation of what it means to say that the individual is social through and through to the core, one that does not require the postulate of a psychic suprasystem. Mead's theory of mind is firmly linked to the body because mind as silent conversation of gestures requires a living, biological body. The conversation involves more than words; it is always interwoven with feelings and direct communication between bodies in the medium of feelings, a point Foulkes clearly makes in his notion of resonance.

The individual mind is then logically the same process as social relating, in that both are cooperative communicative interactions of living bodies. The only difference is that one is silent and private while the other is vocal and public. It is impossible to have a mind in advance of vocal, public interaction, just as it is impossible to have that vocal, public interaction, that sophisticated human social

cooperation, in the absence of minds. Neither form of conversation is primary or prior to the other. They must both arise together, simultaneously. This immediately renders problematic the labelling of one as more or less fundamental and suggests that the individual and the social are at one level of explanation, not two. This is also Elias' view (1989) who said that the individual was the singular of relating and the group the plural. Meaning is not something that is going on in a mind as thought before action but, rather, arises, and continually re-arises, in the conversation of gestures, in the action and interaction, through social relationships conducted in significant symbols. There is no need to postulate a separate psychic or social level, or any kind of transpersonal processes, or any notion of a group mind.

Mead takes the argument a step further with his concept of the generalised other. By this he means that one does not simply call forth in oneself the attitude to one's gesture of a particular other but comes to call forth in oneself the collective attitude towards one's gesture. In other words, in the private role play of silent conversation the attitude of one's group towards one's actions finds a voice. This is a social form of control, arising simultaneously in the group and the individual.

Mead then goes further to suggest what it means to be self-conscious. One is self-conscious when, as a subject, one becomes an object to oneself. To be an object to him / herself, an individual must experience him / herself from the standpoint of others; he or she must talk to him / herself as others talk to him or her. This happens as an individual learns to take up the roles of others to him / herself, as a unique identity, in a form of role-play with him / herself. The silent conversation then involves a 'me', that is, an identity, which is the attitude of one's group towards oneself. The individual's response to this 'me', is the 'l', that is, the action that an individual takes in response to the perceived community view of him / herself. The 'l' response is potentially novel and hence unpredictable. The 'l' response has the potential to change others, opening up the way for simultaneous individual / group evolution.

In this process, an individual takes the attitude of the whole community towards him / herself, as well as the attitude of individual others towards him / herself and the attitude of others towards each other. It is through this process that individual and community display controlled cooperative behaviour. This sophisticated human social process is possible only in language. It follows that the self is a social construction emerging in relationships with others and only animals that possess language can possess a self that they are aware of. Mind and self do not emerge out of a clash between something that is already there in the individual and social constraint as in the classical Freudian view. Mind and self emerge in social relationships. Individuals are forming and being formed by the group at the same time. Mind and self arise between people rather than being located in an individual. Change in the group and in the individual is the same process, namely, change in patterns of communicative interaction. An individual changes when his / her private role play / silent conversation with him / herself changes.

However, if there is no psychic or other system above, below or behind the ongoing flow of communicative interaction between bodies in the living present, just what is it that imparts pattern, or coherence to that communicative interaction? Mead did not address this question and it is here that insights from the natural complexity sciences (see Waldorp,1992; Stacey, Griffin & Shaw, 2001) developed over the last few decades have, I believe, some important analogies to offer.

Analogies from the natural sciences of complexity

Natural complexity scientists (for example, Goodwin, 1994; Kauffman, 1995; Allen, 1998a, 1998b; Prigogine, 1997) are very much concerned with the guestion I have just posed. They are interested in explaining how vast numbers of interactions between entities in nature can produce coherence in the absence of any blueprint or programme determining that coherence. Very briefly, the kind of explanation many are working with is this. Vast numbers of entities, such as the neurones in a brain or ants in a colony, interact with each other according to their own local principles of interaction, that is, they self organise. In certain conditions of a paradoxical nature, sometimes called the edge of chaos, and sometimes called complexity, this kind of self organisation displays the capacity to produce emergent coherence that none of the entities 'intended' or 'knew about in advance'. Emergence is, thus a different notion of causality, one that does not depend upon a blueprint or any system outside of interaction itself. In other words, emergent coherence is not due to anything above, below, behind or anywhere else. Emergence is coherence arising in the interaction itself. By analogy, it seems to me to be quite plausible to argue that human interaction also has intrinsic pattern forming properties. It follows that Mead's concept of continuing social acts as gestures-responses has intrinsic pattern forming capacities, making it superfluous to postulate any kind of psychic suprasystem.

Note at this point that complexity here is a theoretical construct, sometimes specifically meaning a paradoxical dynamic of stability and instability at the same time and sometimes referring to a collection of other constructs to do with self organization and emergence. Clearly, in the quotation at the beginning of this chapter, Foulkes was using the word complex as a descriptive adjective, not a theoretical construct. Notions of self organisation and emergence, therefore, offer an alternative way of understanding Foulkes' insight about the importance of communicative processes in a group. The following paragraphs briefly outline some of the theorising of Prigogine, based on his work in chemistry and other areas. For me, they are suggestive of how one might think about human groups.

At the beginning of his book called *The End of Certainty*, Prigogine poses what he sees as a central question: 'Is the future given, or is it under perpetual construction?' (1997). His answer to the question is clear: he sees the future for every level of the universe as under perpetual construction. He says that nature is about the creation of unpredictable novelty where the possible is richer than the real. For him life is an unstable system with an unknowable future and human creativity is essentially the same process as nature's creativity. Central to Prigogine's approach, at all levels, is the distinction between individual entities and populations, or ensembles, consisting of those entities. Prigogine takes the ensemble as fundamental and argues that change in whole ensembles emerges over long periods through the amplification of slight variations in individual entities, that is, the variability of individuals in the case of organisms or microscopic collisions in the case of matter. It is this variability that is amplified to reach bifurcation points where a system spontaneously self organises to take completely unpredictable paths into the future. Self organisation is the process in which a system 'chooses' a path at a bifurcation point as a result of individual variability, or fluctuations. Prigogine is

arguing, therefore, that even at the most fundamental levels of matter, it is the individual variability of entities and the interactions between them that lead to emergent change in populations or ensembles. He sees this process as extending to every level including that of human action.

The possibility of the evolution of novelty depends critically on the presence of microscopic diversity. When individual entities are the same, that is, when they do not have any incentive to alter their patterns of interacting with each other, there is only stability. When individual entities are different and thus do have incentives to change their patterns of interaction with each other, they display rapid change of a genuinely novel kind. The 'openness' of the individual entities to the possible leads to a continuing dialogue between novel individual 'experiments' and (almost certainly) unanticipated collective effects. Here, the future is under perpetual construction through the micro interactions of diverse entities. The 'final' form towards which a phenomenon moves is not given beforehand, nor is it being 'chosen' from outside. The forms continually emerge in an unpredictable way as movement into the unknown. However, there is nothing mysterious or esoteric about this. What emerges does so because of the transformative cause of the process of the micro interactions, the fluctuations themselves.

What emerges, then, is always potentially transformed identity: the identities of the whole and of the entities constituting it at the same time. And therefore, the differences between the entities themselves, and their collective difference from other wholes, also emerge at the same time. Micro interactions transform themselves in a paradox of forming while being formed and an explanation of what is happening requires an understanding of these micro interactions (Stacey, Griffin & Shaw, 20001).

Mead's explanation of mind self and society is a similar expression of this view of causality, one in which the process of interaction between biological bodies is the transformative cause of that interaction. In this explanation, it is in the detailed interaction between people, their ongoing choices and actions in their relating to each other, that their minds and selves arise. They arise as patterns that display both continuity and potential transformation. At the same time, the social, the cooperative interaction of humans, is also formed as continuity and transformation. The movement here is paradoxical in that it is both continuity and transformation at the same time, the known and the unknown at the same time, the individual and the social at the same time, that all arise in the micro detail of interaction.

This means that there is no need to postulate a suprasystem or to posit a foundation matrix that unfolds what is already unfolded. Human communicative interaction could have the intrinsic capacity to pattern itself and Mead suggests how this might actually happen in an account based entirely on communicative interaction itself. I now want to turn to more recent studies of human relating that seem to me to point to the transformative potential of communicative interaction between people.

Developing the notion of the the group matrix as process

Using detailed research on infant behaviour, Stern (1985; 1995) explains how an infant's self emerges in the mutual relationships between her and her family members. In effect he presents a family as an evolving process in which family

members relate to each other in accordance with principles that organise their experience. Stern calls these organising principles *schemas-of-being with*:

- 1. A *schema-of-being-with* is based on the interactive experience of beingwith a particular person in a specific way, such as being hungry and awaiting the breast or bottle or soliciting a smile and getting no response. a way that is repetitive in ordinary life.
- 2. A representation-of-being-with is a network of many specific schemas-of-being-with that are tied together by a common theme or feature. Activities that are organized by one motivational system are frequently the common theme for example, feeding, playing, or separation. Other representations are organized around affect experiences: they might be networks of schemas-of-being-sad-with or happy with, for example. Yet other representations are assemblies made up of many representations that share a commonality such as person (all the networks that go with a specific person) or place or role. Stern, 1995, pp19-20)

Stern is here describing an individual psyche in terms that are quite consistent with the functioning of the brain. Just as neurones trigger other neurones, so one schema-of-being with triggers others. Although he uses the terminology of representations, which may be problematic, he is postulating that the psyche is a process of interacting schemas rather than some mental apparatus or psychic system above them. He describes how an infant's schemas-of-being-with evolve in the interactive experience with the mother and the father and other family members and how an infant self emerges in this evolution. He talks about how the mother has many schemas-of-being-with, for example, her schemas-of-being-with her infant, her mother, her husband, herself, and about how they interact with her infant's schemasof-being-with her. He illustrates in some detail how both the normal and the pathological development of a personality emerge from the continuous interaction between all of these schemas-of-being-with and how indeed the infant's arrival contributes to the further evolution, normal and pathological, of all other family members' schemas-of-being-with. Although he does not use the terminology of complexity theory, it seems to me that he is describing complex processes in which each family member's relational schemas are interacting with those of others to producing emergent patterns of family relationship (the group) that constitute the further evolution of their relational schemas (individual minds). These relational schemas are continuously replicated or recreated and as this happens there is the possibility of novel emergent relational patterns.

Those writing from an intersubjective psychoanalytic perspective adopt a similar formulation (Stolorow, Atwood & Brandchaft, 1994):

... recurring patterns of intersubjective interaction within the developmental system result in the establishment of invariant principles that unconsciously organize the child's subsequent experiences It is these unconscious ordering principles, crystallized within the matrix of the child-caregiver system, that form the essential building blocks of personality development (p5)

Thus the basic units of analysis for our investigations of personality are

structures of experience - the distinctive configurations of self and other that shape and organize a person's subjective world. These psychological structures are not to be viewed simply as "internalizations" or mental replicas of interpersonal events. Nor should they be regarded as having an objective existence in physical space or somewhere in a "mental apparatus." Instead, we conceptualize these structures as systems of ordering or organizing principles through which a person's experiences of self and other assume their characteristic forms and meanings. Such structures of subjectivity are disclosed in the thematic patterning of a person's subjective life. (p23-24)

Consider how the above formulations might be used to think about a therapy group as complex processes of communicative interaction. I want to use the term organising 'theme' rather than organising 'principle' or 'schema' because it captures for me the narrative and motivating nature of the process through which humans interactively organise their ordinary, everyday experience in narrative-like patterns (Bruner, 1990; Stacey 2001). Terms such as 'principle' and 'schema' convey a sense of propositions, or rules, and in doing so fail to be suggestive of the fluidity in the organisation of ordinary, everyday experience. As members of a group communicate with each other publicly and vocally, that is, as they act bodily toward each other, their interaction patterns itself in an emergent way as one communication triggers others. Public communicative interaction is thus being patterned as narrative themes patterning the experience of being together. As they communicate with each other, each also simultaneously engages in a private role play / silent conversation, which is the action of the body directed toward itself. This private communicative interaction is also patterning itself as personal organising themes reflecting personal histories of relating to others.

These organising themes, both public and private, are not, however, to be thought of as constituting a suprapersonal system because they are the acts of bodies. Furthermore, they are not to be thought of as models or inner worlds that are stored in brains, waiting to be brought out of storage as it were, and shared. Some neuroscientists are now arguing that changes in the brain in response to stimuli are transient and do not last for more than a few hours (Rose, 1995) and others, working from a complexity perspective, argue that it is inappropriate to describe the brain as storing anything (Barrie et al 1994; Freeman, 1994, 195; Freeman & Schneider, 1992; Freeman and Barrie, 1994; Skarda & Freeman 1990; Kelso, 1995). For example:

The patterns of activity are created by dynamic neural interaction in the sensory cortex, not by registration and filtering of stimuli. There is no evidence for storage, retrieval, cross-correlation or logical tree search. (Freeman, 1994, p332)

...... the brain is *fundamentally* a pattern-forming, self-organized, dynamical system poised on the brink of instability. By operating near instability, the brain is able to switch flexibly and quickly among a large repertoire of spatio temporal patterns. It is, I like to say, a "twinkling" system, creating and annihilating patterns according to the demands placed on it. (Kelso, 1995, pxvii)

It seems therefore to be inappropriate to think of storing psychic organising themes, either uniquely individual or shared with others, and more appropriate to think of themes triggering other themes, sometimes along routes that have become habitual and sometimes along novel routes. These themes are most obviously expressed in language, in the to and fro of ordinary conversation, but they are also no less importantly expressed in nonverbal cues and emotional resonance.

So, as soon as members of a group meet each other they all actively, albeit largely unconsciously, select and so organise their own subjective experience of being in that place with those people at that time and they do this according to some personal organising themes formed in their own individual histories of relating. However, what those particular themes are at that particular moment will depend just as much on the cues being presented by others as upon the personal history of a particular individual. Each is simultaneously evoking and provoking responses from others so that the particular personal organising themes emerging will depend as much on the others as on the individual concerned. Put like this, it becomes clear that no one individual can be organising his or her experience in isolation because they are all simultaneously evoking and provoking responses in each other. Together they constitute intersubjective, reflexive processes of emergent themes patterning their experience of being together in which further themes continuously emerge.

The group matrix can then be defined, not as a system or a network, but as process, that is, continuously replicating and potentially transforming patterns of *intersubjective narrative themes that organise the experience of being together.* These themes emerge, in variant and invariant forms, out of the interaction between individual group members as they pattern that very interaction. However, these processes are embodied. Although themes patterning the experience of being together emerge in the interaction between people and therefore cannot be located 'inside' any individual, the experience that is being so organised is always a bodily experience, that is, changes, marked or subtle, in the feeling tones of those bodies.

The following clinical material illustrates how themes organise group members' experience of being together. This is an illustration, not evidence of the veracity of the theoretical points I have been making. I do not believe that such accounts could constitute evidence in any traditional scientific sense because each group meeting is unique and open to many different interpretations. What follows, then, is an illustration of the theoretical position I have been taking but you, the reader, may well interpret it in a completely different way.

Clinical Illustration

In a session some twenty months into the life of a group, Bill repeated a consistent complaint about the group not addressing feelings or members' relationships with each other. As usual, Diane and Helen took his comments as a direct criticism of them and aggressively suggested that there was nothing stopping him from talking about his relationships. Fred, as usual, supported Bill and complained about not being able express anger in the group. Jane said that she found Bill's long silences frightening and felt that he did not like her. David attacked Bill for adopting a superior attitude. By this time Bill had slumped back into his seat in a kind of silent, analytic

pose. He announced that the remarks of the others had simply confirmed what he already knew, namely, that people in the group did not like him. Diane said that occasionally she saw flashes of his personality that she liked. He replied that he did not care what she thought and told her that she was very self-centred.

So, remarks by one person evoke feelings and remarks from another, which in turn trigger other remarks and feelings in others in a self-organising way. The private role play /silent conversation of each proceeds simultaneously with their public communicative interaction. There is an invariant and therefore largely predictable strand in the themes that emerged here as continuity with the past. On many occasions before. Freda, Helen or Diane would recount some difficulty they were having and this would evoke complaints from either or both of Bill and Fred that feelings were not being expressed. This would be denied and taken as a criticism. However, the particular form this sequence would take and when it would occur was quite unpredictable: there was always the potential for transformation. Also, the communicative process organising itself as themes of being together does not mean that all share the same theme. Each member is responding differently around a theme that has to do with dissatisfaction with the group and each other, of being liked or not liked. For example, Jane is organising Bill's silence into an experience of not being liked while Diane organises her experience of Bill's remarks into a criticism of her. Bill organises whatever they all say or do as further confirmation of their not liking him.

I am suggesting that group communication is processes patterned as many themes that organise the experience of being together in the group. These interacting themes are simultaneously arising between people and being experienced in their individual bodies. Thus, in the case given above, Bill's remark about people in the group being considerate is evoked by Diane's prior comment and his remark in turn evokes a statement from her. But, as he makes his remark he slumps in his chair while she stiffens in hers signalling her apprehension. Even where there is no apparent change in posture I am suggesting that there will always be subtle changes in body rhythms as changes in feeling states accompany the emergent themes organising experience. Communicative interaction is selforganising as emergent pattern in itself. These patterns are changes in the themes organising local interaction as group members seek to fit in with each other in some way. These organising themes are continually re-creating themselves in a selfreflexive way as people continuously experience the changes in their bodies. Note how the explanation runs entirely in terms of communicative interaction, having conscious and unconscious aspects, in a way that does not require any notion of a suprasystem or transpersonal processes. The explanation is action based with nothing behind, above or below the action itself.

Paying attention to themes organising the experience of being together

From the perspective I am suggesting, the group conductor seeks to understand the group in terms of his or her perceptions, feelings about, and resonance with, the emerging themes organising the experience of being together. As a participant in the construction of these themes, the group conductor may articulate some of those themes, particularly those that the group members seem unconscious of, in the

interest of assisting the group to take the next step. In the Foulkesian tradition the conductor seeks to facilitate communication, particularly when it is stuck in repetitive patterns or when the group's pathology is located in one of its members.

Here again I find an analogy from the complexity sciences helpful. Complex systems generally display three classes of dynamic. In some conditions the system dynamic takes the form of repetitive patterns of regular predictability. In other conditions, the same system displays patterns of randomness and disintegration. But at intermediate conditions between those producing regularity and those producing disintegration, the system displays the dynamic known as the edge of chaos, or what others call complexity. Here the system dynamic is paradoxically patterned as stability and instability at the same time. Researchers have shown that the healthy heart functions in the dynamic at the edge of chaos and that disease is the loss of complexity (Golberger, 1997). This, it seems to me, is analogous to Foulkes notion of a healthy group as one characterised by free flowing communication while the unhealthy group is one that loses this 'complexity' and gets stuck in repetitive interactions.

There is another implication too. If an individual mind is thought of as a private role play or silent conversation, then it is useful to ask group members to recount what they say to themselves, particularly when they are depressed, about to panic, or experiencing other distressing moments. I have found that this question is immediately understood by group members and elicits useful material that seems to move the member forward in the sense of participating more fully in the group. The aim is to encourage shifts in patterns of silent conversation, to introduce new voices and greater variety into silent conversation with oneself, as relief from the repetitive silent conversations of mental distress.

Conclusion

This paper has argued that the group matrix is not a system but processes of interaction in which intersubjective narrative themes pattern the members' embodied experience of being together. I have suggested that these are self-organising processes that emergently re-produce themselves as bodily actions, always with the potential for transformation. In other words, themes produce further emergent themes patterning the experience of being together in potentially transformative ways.

From a complexity perspective there is no need to postulate a suprapersonal psychic system or any transpersonal processes. Nor is there any need to postulate an individual mental apparatus. Instead there is a notion of psychic phenomena as emergent narrative themes that form while being formed by patterns of communicative interaction between human bodies.

References

Allen, P. M. (1998a) 'Evolving complexity in social science', in Altman, G. & Koch, W. A. (eds), *Systems: New Paradigms for the Human Sciences*, New York: Walter de Gruyter.

- ----- (1998b) 'Modeling complex economic evolution', in Schweitzer, F & Silverberg, G. (eds) *Selbstorganization*, Berlin: Dunker and Humbolt.
- Barrie, J. M., Freeman, W. J. & Lenhart, M. (1994) Cross modality cortical processing: Spatiotemporal patterns in olfactory, visual, auditory and somatic EEGs in perception by trained rabbits, Society for Neuroscience Abstracts, 414.10.
- Bhaktin, M. M. (1986) *Speech Genres and Other Late Essays*, Austin Texas: University of Texas Press.
- Bruner, J. (1990), Acts of Meaning, Cambridge Ma: Harvard University Press.
- Elias, N. (1970) What is Sociology? New York: Columbia University Press.
- ----- (1989) The Symbol Theory, London: Sage Publications.
- Dalal, F. (1998) Taking the Group Seriously: toward a post Foulkesian group analytic theory, London: Jessica Kingsley.
- Freeman, W.J. (1994), Role of chaotic dynamics in neural plasticity, in van Pelt, J, Corner, M. A., Uylings, H. B. M., & Lopes da Silva, F. H. (eds), *Progress in Brain Research, Volume 102*, Amsterdam: Elsevier Science BV.
- ----- (1995), Societies of Brains: A study in the neuroscience of love and hate, Hillsdale NJ: Lawrence Earlsbaum Associates Publishers.
- ----- & Schneider, W. (1982), Changes in the spatial patterns of rabbit olfactory EEG with conditioning to odors, *Psychophysiology*, 19, pp45-56
- ----- & Barrie J. M. (1994), Chaotic oscillations and the genesis of meaning in cerebral cortex, in Buzsaki, G., Llinas, R., Singer, W., Berthoz, A. & Christen, Y. (eds), *Temporal Coding in the Brain*, Berlin: Springer.
- Foulkes, S. H. (1971) Access to unconscious processes in the group-analytic group, in (1990) S. H. Foulkes Selected Papers: Psychoanalysis and group analysis, London Karnac.
- ----- (1973) The group as matrix of the individual's mental life, in (1990) S.

 H. Foulkes Selected Papers: Psychoanalysis and group analysis, London Karnac.
- Goodwin, B. (1994) *How the Leopard Changed its Spots*, London: Weidenfeld and Nicholson.
- Goldberger, A. L. (1997), Fractal Variability versus Pathologic Periodicity: Complexity Loss and Stereotypy in Disease, *Perspectives in Biology and Medicine*, 40, 4, pp543-561.
- Kauffman, S. A. (1995) At Home in the Universe, New York: Oxford University Press.
- Kelso, J. A. Scott (1995), *Dynamic Patterns: the self-organization of brain and behavior*, Cambridge MA: MIT Press.
- Mead, G. H. (1934) Mind, Self and Society, Chicago: Chicago University Press.
- Prigogine, I. & Stengers, I. (1984) *Order Out of Chaos: Man's new dialogue with nature*, New York: Bantam Books.
- ----- (1997) The End of Certainty: Time, chaos and the new laws of nature, New York: The Free Press.
- Rose, S. P. R. (1995), Memory formation: its molecular and cell biology, *European Review*, 3, 3, pp243-256.
- Skarda, C. A. & Freeman, W. J. (1990), Chaos and the New Science of the Brain, Concepts in Neuroscience, 1, 2, pp275-285.

- Stacey, R. (2001) Complex Responsive Processes in Organizations: learning and knowledge creation, London: Routledge.
- ----- Griffin & Shaw (2001) Complexity and Management: Fad or radical challenge to systems thinking? London: Routledge.
- Stern, D. N. (1985) *The Interpersonal World of the Infant*, New York: Basic Books ----- (1995) *The Motherhood Constellation: A unified view of parent-infant psychotherapy*, New York: Basic Books.
- Stolorow, R., Atwood, G. & Brandchaft, B. (1994) *The Intersubjective Perspective*, Northvale, NJ: Jason Aaronson.
- Vygotsky, L. S. (1962) Thought and Language, Cambridge MA: MIT Press.
- van der Kleij, G. (1982), About the Matrix, Group Analysis, XV/3, 219-234
- Waldorp, M. M. (1992), Complexity: The Emerging Science at the Edge of Chaos, Englewood Cliffs, NJ: Simon & Schuster.