

Community as a Self-referential Social System: Relations in Time-space

QUESTION #2

Time and space are dimensions through which community has often been conceptualized.

Do temporal and spatial scales play a role in your conceptualization of community as a complex social system? Explain how each does play a role; or if it does not, explain why not, and consider how it might be incorporated and what role it would then play.

Understanding of question.

I have interpreted this question such that the role of “dimensions” of time and space in my conceptualisation of community is interwoven with a question of scale. As such, my approach to the question is as two components:

Does time and space play a role in your conceptualization of community as a complex social system? What scale(s) for each might apply?

The implication of this is to examine “scales” of time and space explicitly but within a broader discussion about the role of the dimensions of time and space.

Q#2 DISCUSSION

Dimensions and scales of time and space do play roles in the conceptualisation of community as a self-referential social system. The point I make by the end of this discussion is that community may be viewed as a multidimensional pattern of relational space among its components (e.g., events, interactions, information). A dimension of time-space both gives shape to and is embodied within this relational space.

Self-referential social systems process complexity in the form of meaning. Meaning guides the selection process of each element of communication, that is, meaning enables the system to make distinctions and thus, determine for itself what is information, how it may be acted upon, and how it may be interpreted. Meaning creates difference, and

difference produces additional information, which re-produces communication. To explore how these concepts relate to the above question, I will discuss both the role of time and space within the conceptualisation of community, as well as how community as a self-referential social system conceives of time and space. The latter also serves to further my conceptualisation of community.

Within the formulation of Luhmann's theory, the self-referential mode of reproduction grounds community in the present, for that is where meaning is constituted. The present is constituted by events that are continuously being created and destroyed; the past and future are contingent upon the present. The nature of communication, namely, the necessary selectivity of meaning-processing, sets out a world of complexity and contingency. It is from contingency that objectivity arises. Objectivity is the ability of the system to identify and fix time, which gives rise to structure. But structure does not exist in time or space; it derives from the past and functions as a temporal bridge between events. It is within these concepts that I will discuss how scales and dimensions of time and space (or time-space) contribute to the conceptualisation of community as a self-referential system.

I will also discuss how a dimension of time-space is constructed as *local* by the community system for its own use and, thus, constitutes its own boundary. The mechanism in place to do so is to identify a binary code, that being local/non-local. In co-evolution with the psychic system, the social system reproduces local through self-referential reproduction.

Through further discussion, I will introduce attractors to explain how a sense of belonging may be conceptualised. The construct of local, I hypothesise, is experienced by the social system, through its feedback structure, as an attractor. The attractor gives rise to a sense of belonging as a quality of time-space. After explaining this, I will explore how the qualities of time-space may be conceived as patterns of community organisation, which I refer to as relational space.

The following discussion is divided into four sections. (1) I will discuss how community is situated within the context of societal differentiation, which illustrates how a temporal dimension is implanted in a community system; (2) I will discuss how

community is grounded in the present through events that are continuously (re)produced and through structure; (3) I will explore how local might constitute the meaning boundary of community systems; and, (4) I will discuss the pattern of the system's organisation as a construct of time-space.

1.0 Internal differentiation of society

The first time-space dimension I will discuss is embedded within the internal differentiation of social systems. This is similar to the theory of the Arena Society (Fuller 1994), wherein past time-space dimensions of settlement patterns are overlaid upon each other and manifested within the present pattern of community settlement.

Luhmann's social differentiation starts with the premise that society is the "unity of the totality for all things social," i.e., it is the all-encompassing social system and therefore does not have a social environment (Luhmann 1995:408). The driving force behind his theory is that society is necessarily becoming functionally differentiated. This is the result of an evolutionary process of increasing internal differentiation (i.e., the system develops a greater number of its own subsystems). According to Luhmann, society has evolved through three forms of internal differentiation: segmentation (identical sub-systems, e.g., villages); stratification (societal hierarchy, e.g., nobility and peasants); and, functional (particular tasks, e.g., law, politics, economy). I believe Luhmann would argue that community systems would emerge within the period he defines as segmentation¹, with each community system developing a local identity (which will be discussed in the following section). Through this process of societal evolution, a temporal dimension is embedded within community. As a result, "society [as a whole] no longer has a center or controlling sub-system, but becomes the indeterminate outcome of the interactions among these independent but interdependent domains" (Mingers 1995:141). I would argue that a community system is subject to similar conditions.

2.0 Community grounded in the present

¹ Although he does not refer to community directly, community *may* be conceived as an organisational system. See Luhmann (1982).

Two aspects of community ground the self-referential system in the present. I will discuss (2.1) communication events and (2.2) structure as a temporal bridge between elements.

2.1 *Events*

Some approaches to social systems posit either people or action as the operating unit among functionally interrelated components (Luhmann 1991:137-175). One advantage of this is to retain the usual linear notion of time and space that we experience on a daily basis. For example, Giddens (Mingers 1995:133) in his theory of structuration, defines action as “a stream of actual or contemplated interventions of corporeal beings in the ongoing process of events-in-the-world.” For Giddens, action is always located within the dimensions of time and space. (To this, he adds that action must also always be located in social structure.) Complex social systems are based on neither people nor action as the elemental unit; it is based on *communication*. This, from the outset, has implications for how the roles of time and space may be conceptualised.

Communication is comprised of three elements: information (a selection from the repertoire of referential possibilities), utterance (a selection from a repertoire of intentional acts), and understanding (the observation of the distinction between utterance and information) (Knodt 1995:xxvii). It is utterance that is interpreted as action; it is through utterance that communication is actualised as action from one moment to the next. “Therefore, it is not false, only one-sided, for a communication system to interpret itself as an action system. Only by action does communication become fixed at a point in time” (Luhmann 1995:165). In this way, the relationship between action and communication is reversed. In other approaches, communication is viewed as a type of action. In self-referential social systems, action is constituted by means of communication. Collectively, the three elements of communication comprise an *event*, which occurs at a point in time and then disappears. Similarly, information has its identity in the moment and does not endure through time. Fundamentally, it is the event that grounds communication in the present. A quotation from Luhmann will emphasise this point.

“(E)very event brings about a total change in past, present, and future—simply because it gives up the quality of being present to the next event and becomes a past for it (i.e., for its future). This minimal displacement can change the perspective of relevance that structures and bounds the horizon of past and future. In this sense, every event brings about a total modification of time.”

In self-referential systems, events are being created and destroyed continuously. As such, the system unfolds itself through time but communication and action are constituted only in the present.

2.2 *Structure as a temporal bridge*

The concept of structure defines how elements relate across temporal distance, i.e., from event to event (Luhmann 1995:282). Structure, however, does not exist in space and time; rather, it exists in the present, in the moment as the relations between elements. Structure is also historical in nature, i.e., it arises within the history of communicative processes (Luhmann 1990:32). Expectation is an example of structure. Expectation (about the other person, about whether the other person will or will not understand, and about the acceptable bounds of the conversation) is a way of dealing with possible futures that is grounded in the past and constituted in the present. It may be viewed as a structure that *dissipates* contingency and, as such, as “an emergent order that is dynamic and constantly changing” (Knodt 1995:xxviii).

3.0 **Local as the meaning-boundary of community**

My second point of discussion is how local (as a dimension of time and space) *might* be constituted within a self-referential community system. Herein, my interest is to explore the possibility as to how local, viewed as a time-space dimension, might constitute a meaning boundary of a community system. This discussion relates to my discussion within Question #1 about the emergence and function of community as a sub-system.

The social system is a meaning-processing system. It emerged from a need to produce structures that an individual psychic system (or primitive society) was unable to create on its own (Luhmann 1995; Hejl 1984). In this way, the social structure (e.g.,

myths, religions, art, science) produced by the social system ensures society's ability to process increasing levels of complexity. The emergence of community systems may be understood in the same terms. As the social system co-evolved with the psychic system, community systems co-evolved with society. At a "point" in the evolution of society it is conceivable that concentrations of social interactions (communications) became bound in time and space. To facilitate communications, social structures would have emerged particular to this concentration of interactions. Subsequently, as a process of selection and to give order to experiences between these interactions, an identity would have emerged constituted as local. This would enable the 'local' system to make distinctions; determine for itself what is information, how it may be acted upon, and how it may be interpreted.

This is the evolutionary process that might explain the emergence of community systems. Continuing this discussion, the boundary between a system and environment is an order of complexity; the system is always less complex than its environment. Within social systems, the boundary is constituted in meaning. The identity of the system, constituted in meaning, also functions as the boundary. Meaning boundaries are formed as each sub-system utilises a particular binary code representing the good/bad or positive/negative. As presented in Question #1, I suggest that the binary code for community might be local/not local. Therefore, within community systems, locality would emerge as the meaning boundary, an enduring consciousness that is constituted temporally and spatially within social structure.

Why is this important? As noted, the evolution of society is premised upon meaning: the need to make sense of the world that is becoming increasingly differentiated. As discussed in Question #1, structures save on communication by guiding the selection process, which in turn is guided by meaning. From this, we can begin to see how community and the identification of locality might co-evolve. Getting expectations right is facilitated by concrete familiarity with persons, habits, characteristics, personal histories, etc. These become a "regulative premise for conducting our experience" (Luhmann 1990:49). To use the terms introduced elsewhere, locality is identified and labeled to facilitate communication by introducing local/not local code and thereby limiting the horizon of possibilities when two people interact. Labeling community as local/not local

serves to reduce complexity, it is a way to make information processing easier and to make meaning of the social world. To extend this discussion further, the identification of locality within community will be reproduced so long as it remains useful, that is, so long as it facilitates communication. It is this aspect of autopoiesis within meaning-processing social systems (in co-evolution with the psychic system) that might contribute to a sense of belonging and trust. Therefore, local identity as the meaning boundary of community is important because it is the meta-structure that co-evolves with the community system – they both shape the particulars of each other over time.

4.0 The pattern of community organisation

From previous points of discussion, community is conceptualised as a meaning-processing system. All meaning systems (social and psychic) help us make sense of the complexity of the world. Through a process of internal differentiation, community emerged as a sub-system of society that helps humans make sense of the social world. Because social systems are grounded in the present through communicative events, community, as a concentration of events, is not only grounded in time, but also in space.

“Membership” in the community system emerges as a code of local/not local identity. Local identity², as a construction of time and space, becomes embedded within the system. My hypothesis (already based on several hypotheses) is that through a process of iteration and feedback, local identity emerges as a system-wide (i.e., global) structure. As a structure, local identity influences the behaviour of the system by affecting the behaviour of the system’s components, e.g., people, events, and interactions. The structural aspect of local identity may be experienced in many forms, such as a sense of belonging, sense of place, and hometown.

This is the hypothesis that I will carry forward. In the following discussion I will expand upon this within the context of global and local structures. I will then discuss how

² I will use the term ‘local identity’ to mean local as the dimension of time-space described above. This will serve to distinguish this concept from the use of local to describe the scale of a system, e.g., local versus global rules.

both local and global structures may be conceptualised as the relational space of community. Both of these points may be interpreted as an elaboration of a system's pattern of organisation.

4.1 *Local and global structures*

I put forth that within social systems, local structures (e.g., one person speaks at a time, pass to the right) influence the behaviour of people in personal interaction. Global structures may be distinguished as those structures that influence system-wide behaviour as a whole (e.g., norms, values), including the indirect influence of interactions. Local identity would be a global structure as, according to the discussion above, it is an identity of the system itself.

Local and global structures may be interpreted in common terms. I suggest that local structures, which may be also thought of as rules, are addressed by the use of terms like etiquette. For example, there is appropriate etiquette at the dinner table (don't slurp your soup), during social encounters (shake hands), and on the golf course (don't speak when your opponent is putting). Global structures may not have a corresponding label, although gestalt may be appropriate.

I will argue that global structures may also be understood in complex systems thinking terms as attractors. An attractor is both *defined* by the system (as a potential form of social structure) and is *in* the system (as a constraint on the system's feedback structure that settles it into a few orderly, recurrent behaviors). The *potential* structure of an attractor becomes *actualised* through the specific experience of the system over time (Stacey 1996: 54, 60). Hence, local identity may be conceptualised as more than social structure, it may be a particular kind of structure – an attractor. It would influence the behaviour of the community system by re-inforcing 'membership' in the community, for example, the influence of the local identity attractor may be to shop locally, attend community events, or get involved in issues of local concern.

4.2 *Relational space of community*

I would like to summarise the above discussions by grouping the concepts under *relational space*. The discussion about attractors helps to conceptualise community, and in particular, thinking about local identity as an attractor lends insight to how a dimension of time-space might be embedded within and gives shape to the community system. It is the *shaping* aspect that I will discuss further. More specifically, I am interested in how all the various influences, such as local and global structures, rules and attractors, might be re-framed within a discussion of *relational space*. That is, I will discuss how time and space affects the relations of system components, e.g., events, human beings, interactions, information, and relates to a system's pattern of organisation. The relational space of community would encompass the system's pattern of organisation, or at least, the actualisation of the pattern in social structure, events, and interactions.

To put this discussion into context, my notion of relational space is an attempt to develop a concept of community at the macro or global level of organisation and how that reflects dimensions or scales of time and space. As an extension of the previous discussions, I will consider how events, structures, and interactions might be reflected in the overall organisation of community systems, and in a more practical sense, how it might be analysed. This thinking underlies the following discussion.

The relational dimension of system organisation may be thought of as a personal 'distance' from others. For example, the relational dimensions defined by Lee, Muncaster and Zinnes (Saperstein 1997) were: the friend of my friend is my friend; the enemy of my friend is my enemy; the enemy of my enemy is my friend. Luhmann's use of 'interaction,' which is more explicit than a common understanding of the term, helps to elaborate upon these ideas of personal distance and relational space. Interactions occur when "present individuals perceive one another" (Luhmann 1982:71); it is a face-to-face encounter. "Personal presence" is the defining element of interactions; whoever is not present does not belong to the interaction, regardless of the how intimate that person might be to the ones present. Examples of interactions are: supper with the family; a board meeting; standing in line at the grocery store; a poker game. Interactions are defined in time and space, but are different from an event because the latter is the attribution of communication (information, utterance, and understanding). An interaction is constituted as "everything

that can be treated as present and, if need be, to decide who, among those who happen to be present, is to be treated as present and who is not” (Luhmann 1995:412).

As stated elsewhere, community is a concentration of interaction. Thus, in addition to the function of community as the means of making sense of the world, it also functions as the environment for interactions and bounds interactions within the rules of local/not local. The implication is that interactions are important factors in understanding the relational space (hence, the pattern of organisation) of community systems.

The implications of these dimensions of a community’s relational space are important in the context of increasing system differentiation. As the societal environment becomes more complex more roles are brought to bear in each interaction. In effect, modernisation and globalisation both reduce the influence of local identity and increase the complexity of roles in interactions. This suggests that as globalisation continues to affect the places in which we live and work, the capacity of the community system to process complexity diminishes, the influence of local identity on the behaviour of residents declines, and the relational space of community shrinks correspondingly.

The distinction of the notion of relational space is different from other measures of time-space because it attempts to explicitly account for complexity. Whether this is achievable is another question. Nevertheless, the desired outcome may be compared to other, more ‘conventional,’ approaches to patterns of time and space as it shapes the pattern of societal organisation. The *Dictionary of Human Geography* (Johnston et al 1994) presents at least three concepts: time-space compression, time-space distancing, and time-space convergence. Each of these may be interpreted as *qualities* of time-space that appear as patterns. For example, time-space convergence (Johnston et al 1994:628-9) is a decrease in the time needed to travel between two places and is associated with changing technologies that result in a shift in the nature of interactions. Time-space distancing is the stretching of social systems across time-space and is used to describe societal transformations as they affect system integration (Johnston et al. 1994:631-3). Time-space compression is concerned with how the representation of the qualities of time-space is influenced by processes and reflects an experiential dimension that shapes social life. In addition, the Arena Society (Brydon 1994:133-139), mentioned above, is another

concept of time-space to which relational space may be compared. The Arena Society is connected to processes of change that produce new dynamics, flows and linkages, as well as disconnections. It is in the context of pattern of community organisation that the notion of relational space may be understood and compared with these other time-space models.

As a final reflection, I suggest that this discussion of time and space underlies a broader concern with the quality of organisational capacity and, as such, may be related to the discussion about social structure presented in Question #1. In that discussion, social capital (as a measure of social structure) is associated with the system's ability to develop its capacity for social development.