

Paper presented at Rural Sociological Society 65th Annual Meeting  
*The Community Effect in Rural Places*  
August 14-18, 2002

David J. Connell  
Rural Studies, University of Guelph  
Ontario, Canada  
[dave@djconnell.ca](mailto:dave@djconnell.ca)  
[www.djconnell.ca](http://www.djconnell.ca)

*DRAFT. Please do not quote without the author's permission.*

## **Community: A Place Between Risk and Security**

### **Abstract**

Conventional approaches take community as a given object, presuming community to be a meaningfully distinct form of social order. Concurrently, researchers acknowledge community's conceptual ambiguity. Ignoring the ambiguity appears to absolve this paradox. Alternatively, a radical approach asks how community as a distinct form of social organisation is possible, i.e., how social order emerges and persists. Niklas Luhmann's theory of social systems is used as a framework for the study of social order. Within this framework the author examines the community effect in rural places as a distinct order of communication mediating between the familiar and unfamiliar, between security and risk.

### **Introduction**

Presumably, it is meaningful to reflect upon the community effect in rural places because community is a fundamental unit of social organisation. The concept of community, however, is more elusive than apparent. Over the past century community has been lost, found, and saved amid waves of optimism and pessimism that have accompanied both modernisation and urbanisation. Today, community is 'lost' in the pursuit of globalisation, 'saved' in the virtual world of the Internet, and 'found' in concepts of social capital, civil society, community economic development, community capacity building, and sustainable communities.

Given growing attention to and use of community, it is concerning that we are not in a better position to understand the community effect in rural places. The willingness of researchers, as well as policy-makers and practitioners, to use the community concept in spite of its ambiguities is a problem: it forestalls a debate about the meaning of community. Simply invoking "community" as the way forward (or backward) is not sufficient. If community is an enduring human value of social relationships and place attachments, greater clarity of its meaning is essential to understanding the community effect in an age of rapid growth and political change.

In the pursuit of greater clarity, this paper explores a concept of community as a distinct form of social organisation. Rather than attempt to re-construct or de-construct existing theories, the argument put forth in this paper arises from a critical look at the methodologies of community studies. Within the community studies literature one finds that normal sociological approaches used to understand community limit ontological possibilities. Normal science is defined as areas of study and theory that grow steadily and cautiously, cultivated within a paradigm of theoretical concepts approved by scientists in the pertinent field, including methods and models (Kuhn 1970). Most normal sociological approaches take community as an orderly existence between individuals and society; as either a logical microcosm of society or as a cohesive collection of individuals regardless of scale or propinquity.

Conventional debates about the meaning of community reflect the ontological consequences of accepting the individual-community-society schema. For instance, researchers question the relevance of community in today's society, asking whether or not it has been eclipsed by modernisation and urbanisation (Stein 1960; Warren 1978; Wellman et al 1988). Or, when reduced to individuals, the meaning of community becomes synonymous with "group." Thus giving substance to "communities of interest," "on-line communities," and "communities of practice." This spurs a debate regarding place- versus non-place-based community (Bernard 1973; Wellman et al 1988). These debates appear to contribute more to the conceptual ambiguity of community that they clarify.

Several social theorists have pointed to the limitations of normal science approaches in dealing with social issues (Boudon 1984; Price 1997; Turner 1997). Kenneth Wilkinson (1970; 1991) and Jessie Bernard (1973) specifically pointed to the limitations of normal science approaches in dealing with community. Bernard described the normal science approach to the study of community as passé because it was unable to deal adequately with recent social developments (Bernard 1973:190) – and this was before the Internet and 'globalisation'! Wilkinson (1970:15) stated, "A theory of order is hamstrung from the outset by the fact that disorder, not order, is the dominant feature of many, and perhaps most, human events." Twenty years later Wilkinson (1991:7) re-stated this as, "What is needed is a conception of community that recognises its complexity."

This paper attempts to counter normal methodological limitations by undertaking an inquiry premised upon a social science of complexity. The aim is to explore the meaning of community as a distinct form of social organisation that arises from complexity. Two trends within the community and social theory literatures help to advance beyond a critique of normal sociological approaches. First, the use of 'system' as a core concept to define community has increased (Willis 1977). Second, there have been recent applications of complexity theories to social systems (Buckley 1998; Eve et al. 1997; Marion 1999). Formulating community using complex systems thinking is not well developed, however (Connell 2000). Moffit (1999) and Barbesino (1997) provide only preliminary reflections on community as a complex system. Advancing this line of thinking requires a general theory of social organisation that presumes complexity as a condition of interaction. Niklas Luhmann's theory of self-referential social systems is used for this purpose.

Luhmann's theory of social systems is a social science of complexity. Complexity means that it is not possible at any moment to connect every element with every other element (Luhmann 1995). People extract meaning from complexity by connecting one element to another element. Over time, relations among elements are embedded in the accumulation of shared meanings. From this, Luhmann builds upon a logic of operations based on communication. Social systems emerge and function to process meaning using communication. That is, social systems are systems of communication. When people communicate, people are always making a selection among other possibilities; communication is always a reduction and preservation of complexity. Likewise, meaning is always contingent, one meaningful distinction among a horizon of possibilities.

By embracing Luhmann's theory of social systems, one dismisses fundamental concepts of sociology. These include:

1. the principle of a unified, autonomous subject;
2. the idea of the social as a derivative sphere of intersubjectivity;
3. the corollary of communication as an interaction between subjects;
4. the notion of communication as a transmission of mental contents between separate consciousnesses; and,
5. the corresponding idea of language as a representation of such contents (Knodt 1995:xxv)

The "loss" of the subject is one of the radically important implications of adopting complexity as a foundation for society – and essential to overcoming the ontological limitations of normal science approaches.

### **Ontological Limitations of Normal Sociological Approaches to the Study of Community**

Normal sociological approaches to the study of community are based on a presumption of subject-centred order. A subject-centred "paradigm" impedes a deeper inquiry into the essential meaning of community by restricting ontological possibilities. Most critically, as long as the ontology of normal sociological approaches rests upon the subject, community theories are constrained to describing community as a given object. The subject-object position is only ontological – it will not explain how things come about (Segal 2001:133). Consequently, the meaning of community is often presumed, premised upon normative aspects of belonging and togetherness. The negative implication is that community research reveals descriptions of the surface structures that characterise human settlements and interactions. Namely, community studies focus upon structures, dynamics, and elements that include such things as typologies, class, power, conflict, patterns, networks, and institutions. Consequently, the meaning of community does not arise because it is not asked (Cohen 1995).

Subjects exist, but should only be viewed for what the term originally implied (Luhmann 1995). That is, *subject* means (and should only mean):

"... the modern individual conceives himself as an observer of his observing, which always operates with self-reference and reference to others; thus he understands himself as a second-order observer. One could designate the subject as a unity that, as it itself knows, lies at the foundation of itself and everything else. Or ... it lays the foundations for itself and everything else" (Luhmann 1995:xxxix).

To extend this concept of subject to mean that society is composed of subjects is incorrect. Nor can there be such a thing as *inter*-subjectivity: the other subject is always conceived as a construct of the first subject. Luhmann argued that the mis-use of the term subject developed along with the rise of modernity. The motivation for this was to conceal the self-referentiality of subject because acknowledging a situation of pure self-reference blocks further analysis: the subject is what it is (pure tautology) or the subject is what it is not (pure paradox). Normal sociological approaches take the unity of difference inherent in self-reference and reference to others as a distinction between individual and society. Self-identity is separated from social identity on the basis of subject and inter-subjectivity. Hence, we can (inaccurately) speak of society, the state, the economy – and community, as distinct entities separate from individuals.

As mentioned, Luhmann (1995) argued that society cannot be ascribed to individuals or to their interaction.

“But the staggering naivete with which sociologists (Durkheimians, social phenomenologists, action theorists—it makes no difference) have been content with the statement that, after all, there are such things as subjects, intersubjectivity, the social, and socially meaningful action, without anyone seriously questioning this, should not be accepted anymore.” (Luhmann 1995:xli)

The sociological ‘subject’ (in the singular) as an external observer offered a basis for all knowledge and all action, Luhmann argued, without making itself dependent on an analysis of society.

A general theory of society based on self-referential social systems offers another possibility for conceptualising community. Community premised upon sociocybernetics consists of communicative events, not subjects or actions. Following this argument, it is incorrect to think of community systems as collections of people. Each person is constituted of a bodily system (organism), psychic system (consciousness), and social system (communication). Luhmann refers to a “social system” when “several persons are meaningfully inter-related” via communication (1982:70). How community may be conceived as a distinct social system of communication begins by first examining Luhmann’s theory of self-reference.

### **The Paradox of Self-reference**

A theory of self-reference underlies Luhmann’s criticism of social theory and gives rise to the emergence of society. Self-reference occurs when one tries to get beyond subject as the foundation for science. Luhmann (1995) argued that ever since Husserl, the ‘subject’ could no longer be viewed as the basis for social theory. Husserl clearly argued that subjectivity and self-reference were inexorably bound. Husserl taught us that self-reference functions as a basal condition of subject, as a fundamental unity of self-reference and reference to others: consciousness experiences itself as reference to phenomena. On this basis, contrary to Husserl’s own efforts, the unity of self-reference was indissoluble for consciousness and, therefore, could not be transcended. Consciousness is, at the same moment, knowledge of itself and reference to others. Luhmann argued that, after Husserl, the problem of the foundation of knowledge must be posed as the problem of the operative processing of the difference between self-reference and reference to others” (Luhmann 1995:xli). That is, the analysis of society cannot be answered by beginning with a concept of the subject that does not account for self-reference.

To advance an understanding of community as a social system that begins with self-reference, one must first address the paradox that arises with self-reference. A concept of system encounters self-reference at the outset. For instance, the necessary distinction between system and environment is manifested as a self-description: “Determining what a system is requires determining what a system is not” (Fuchs 1988:24). Acknowledging this paradox does not mean the end of the discussion. The theory of self-reference accepts the paradox, embraces it, so that not comprehension from outside, but only self-description from within in the course of its own operations is possible. (Luhmann 1995:411-2).

Self-reference is when the system *observes itself* and *describes itself* as different from its environment. Through the process of self-observation and self-description, meaning is assigned to the environment in the form of a difference that makes a difference. Meaning as difference is employed to interrupt the circularity of *pure* tautologies (the system is what it is) and paradoxes (the system is what it is not) (Luhmann 1995:38). Self-observation and self-description, therefore, are necessary operations of self-referential social systems. Systems form as an outcome of processing paradox (Luhmann 1995:33). And these systems succeed only if they “de-paradoxise” themselves by employing self-description as a meaningful system-environment difference.

“Self-referential systems are able to observe themselves. By using a fundamental distinction schema to delineate their self-identities, [systems] can direct their own operations toward their self-identities” (Luhmann 1988:36).

Through autopoiesis systems draw their own boundaries in determining what belongs to the environment and what belongs to the system; order is produced from noise. Only the system can decide what to accept as constituting itself and how to demarcate its identity from other systems. This self-constitution implies that system identities are independent from observation from other systems and cannot be ‘caused’ by forces external to the system (Fuchs 1988:23). Hence, social systems are autopoietic, self-referential systems.

### **Second-order Observations of Community**

A theory of self-reference challenges the ontology of an external observer. As Knodt (1995) explained, distinctions like individual-society, for example, are philosophical constructs designed to conceal that there is no external observer. These constructs, however, have broken down and “linguistically based successor theories such as hermeneutics, structuralism, and analytical philosophy have been unable to halt the erosion of modernity’s trust in its own self-descriptions” (Knodt 1995:xi). She concludes that it is precisely the collapse of the boundaries between observer and observed that has given rise to theories of self-reference. And, as has been shown, self-reference gives rise to a theory of observing systems.

The primary distinction that guides observing systems is system-environment and the system’s ability to observe this distinction. Because there is no external observer as required in the subject-object world of normal science, Luhmann’s approach stands in contrast to conventional sociological theories of community based on action theory or the knowing subject. It is a framework that transcends the individual-community-society schema and creates alternative possibilities for understanding community and its effect in rural places.

A shift to social systems as self-referential observing systems fully displaces the conventional role of the subject in sociology. This shift is reflected in methodology as a shift from first-order observations to second-order observations. The 'community problem' may be characterised as a limitation of first-order observations. A first-order study presumes an external observer. Consequently, first-order observations are constrained by the ontological limitations of normal sociological science that describe community. Alternatively, in second-order observations (second-order cybernetics) the aim is no longer to construct a theory of observed phenomena but to include the observer in the domain of science (Umpleby 2001:89).

Luhmann's theory frames an understanding of community as a social system by adopting a methodology of second-order cybernetics. The operative mandate for a sociocybernetic methodology is: observe the observing system. The operative question is: What is the meaningful system-environment distinction being made by the observing system? In other words, one must determine what distinctions guide the observing system.

Every social system re-constructs society using distinctions (Luhmann 1989:107). Such a re-construction of society creates a new internal difference in society: *the difference of this place from all the others in society* (Luhmann 1989:137). Hence, the unity of the difference of system and environment is *the world* (Luhmann 1989:138). "... [T]he concept of a world designates a unity that becomes actual only for meaning systems that can distinguish themselves from their environments and thereby reflect the unity of this difference as a unity that trails off in two endless direction, within and without" (Luhmann 1995:208). Community may now be conceived as a system that processes a meaningful system-environment distinction.

### **Community As 'My Place in the World'**

People have a need to understand the meaning of a close and comprehensible world – their 'place in the world.' The meaning of one's 'place in the world' may be formulated as "this is my place; not elsewhere." One's 'place' is distinct from other places, but people cannot fully conceive of all other places, we cannot conceive the totality of the world. A sense of place stands in distinction to an unknowable world. By default, place is reduced to either a tautology or paradox: it is what it is or it is what it is not. People conceal this self-reference by coding it as a distinction between community and world. As a meaningful distinction between 'my place in the world' and 'not my place in the world,' community is about communicating an intimate and familiar relation of people and space. A close world distinguished between within and without shields persons from the immense complexity and contingency of society by constructing a meaningfully shared difference between personally valid experiences and the universally accepted world (Luhmann 1986:16).

The function to be performed by a community system is to reduce complexity, to select from among a number of different possibilities. This is achieved through self-observation: a meaningful grasp of the world requires a purely momentary grasp of the world as a meaningful difference from itself (Luhmann 1989:17). The more complex the world turns out to be, the ability to communicate becomes improbable, and the persistence of a community less likely. What people need is a way to structure expectations to make it possible for meaningful distinctions made by one person to be relevant to another.

Community emerges only when positive feedback from symbolic generalisations of within-without, of 'my place in this world' and 'not my place in this world,' catalyses the self-reproduction of this distinction as a shared meaning. Feedback via communication, and only communication, gradually changes the mental states of those participating in the communication (Luhmann 1989:30). The generalisation of symbolic media of communication facilitates this process by providing a medium additional to everyday language.

Symbols are "codes of selection" that increase the societal capacity for communication. Truth, love, power, money, are outstanding examples of generalised symbolic media of communication that have evolved 'successfully' (Luhmann 1989). Symbols may be understood as a functional equivalent of similarity (Luhmann 1979:128). Symbols achieve simplification by anticipating what is possible, by stabilising possibility. This both facilitates communication and acts as a catalyst for communication. Generalisations make it possible to share meaning with different people in different situations, which in turn allows people to come to the same or similar conclusions. Generalised symbolic media of communication, therefore, are primarily semantic devices: "connections between the complexity of the world on one hand and the socially regulated processes for differentiating and connecting multiple selections on the other (Luhmann 1979:48).

There are different media of communication, such as codes and programs (Luhmann 1989:43). Codes occur in social evolution and corresponding systems differentiate when codes are operationalised. We can consider the rise of economic systems to illustrate this point in a simplified way. Coins were introduced as symbols of exchange value. The option of paying or not paying developed as the operational code for using coins, and eventually criteria such as price and quality emerged for deciding whether to pay or not. Through time, an economic system has come to dominate society globally, although it did not start out that way.

The capacity of coding to facilitate selection resides in its binary schematic, e.g., between this and not that (Luhmann 1979:134-5). Successful communication media depend on the societal capacity to pre-structure operations by assigning them one or the other of two values. A binary code is a pre-condition of system reference that permits systems to determine what is information in their environment (Luhmann 1989:116), i.e., systems structure their communication through a binary code (Luhmann 1989:36). For example, a law system is structured according to the binary code legal/illegal. The economic system is coded as pay/not pay. The community system is coded as my place/not my place. In effect, codes create the difference of system and environment through difference.

Codes do not operate in isolation; they are mediated by further conditions. Programs, such as theories, laws, investments or party-political alignments, operationalise and regulate codes. Programs are the criteria that determine what is and is not a code-specific difference. For example, if we take 'true' and 'false' as a binary code, we can see that 'true' cannot be applied to determine what is true. This is tautological. Criteria must be available to process the difference between true and false. Programs are these criteria. In science, for example, theories are employed as programs to process the difference between true and false. In community systems, the place/not my place coding is processed by a sense of belonging, a sense of togetherness, as well as other codes like insider-outsider. In this way, programs co-ordinate system operations

with regard to both sides of the binary code “without ever raising the question of the unity of the code itself” (Luhmann 1989:37), i.e., without encountering the paradox of self-reference.

Coding and programming make possible the simultaneous closure and openness of a system (Luhmann 1989:40). Because a system can only operate according to its code, e.g., ‘my place’ and ‘not my place,’ it is closed in this regard. On the other hand, a system’s programming is open and dynamic, exposed to conditions in which ‘my place in this world’ may or may not be meaningful.

Consideration for the community effect in rural places must recognise that social systems are contingent. Community is neither necessary nor impossible. Evolution, therefore, must not be seen as guaranteeing “either the selection of the best of all possible worlds or ‘progress’ in any sense” (Luhmann 1989:108). Societal evolution does not imply an orderly process. Communicative selection produces emergent order: it transforms an improbable order of within-without into a probable (functional) one. Evolution creates its own conditions as it progresses and comes to a halt when and as long as this does not succeed (Luhmann 1989:42).

### **Community Effect in Rural Places**

If we assume that community is an enduring human value: a part of human nature (Cooley 1929:52), a deep longing (Bernard 1973:107), and a compelling urge for sociality (Freie 1998:21), then people have always ‘needed’ a close and comprehensible world. A community system by any other name is still an enduring human value. Community shields persons from the immense complexity and contingency of society by constructing a meaningfully shared difference between the familiar and the unfamiliar. The more complex the world turns out to be, the less likely is the persistence of communities.

The community effect in rural places may be understood within the sociocybernetic framework as the manifestation of a comprehensible world vis-à-vis the increasing complexity of society. The ‘need’ for a comprehensible world persists, but through societal evolution the programs available for people to actualise this need changed, i.e., the generalised symbolic media of communication available were subjected to processes of differentiation. Therefore, it is the openness of social systems that gives rise to a community effect in rural places.

Community systems are influenced by and influence other social systems, such as economics, legal, political, science. Globalisation, post-modernism, and sustainability, to name a few, provide new programs with both positive and negative community effects in rural places. On the one hand, programs challenge community as a meaningful difference from the world. This is reflected in many community studies. Laxer (1995:247) bluntly stated, “In the era of ‘globalisation,’ capitalism has reverted to its bad old ways of destroying community.” Krannich and Greider (1990:61) suggested that by the mid-twentieth century community was not relevant because “there were few if any remnants of the type of traditional social relations which when interwoven comprise community.” Similarly, Stein (1960) talked of the eclipse of community in the mid-twentieth century. Warren (1953:63) suggested, “Changes on the community level are taking place at such a rapid rate and in such drastic fashion that the entire structure and function of community living are being transformed.” Warren argued “the ‘great change’ in community living includes the increasing orientation of local community units towards extracommunity

systems of which they are part, with a corresponding decline in community cohesion and autonomy” (Warren 1963:53). Wellman et al. did not just talk of decline; they dismissed the traditional conception of community. “We look for the social essence of community in neither locality nor solidarity, but in the ways in which networks of informal relations fit persons and households into social structures” (Wellman et al 1988:131). Communities are now “personal networks.” To Wellman et al., the community effect is about how the “small-scale structures, such as interpersonal networks, fit into large-scale division of labour” (Wellman et al 1998:131). Each of these sociological views of community reflects the changing *programs* available for people to process the meaning of a close and comprehensible world. Community is often ‘lost’ in the process.

Changing programs also strengthen the community effect. Several examples support this point. Barbesino (1997:689) argued that community is “increasingly seen as the remedy against the impersonal features of modern society.” Rees (2001) stated that reducing ecological footprints is one step toward sustainability. However, to achieve sustainability people must turn to “community” to restore values. Similarly, Michael Bunce (2001) stated that rural sustainability must focus on community. In each of these examples, “community” (re-)emerges in a programmatic form that is inherently good about local places.

Societal differentiation catalyses the community effect in rural places. The community effect plays off both a need for security and the risks of uncertainty. Increasingly, in the present era of rapid growth and change, residents, politicians, policy-makers, practitioners, and researchers turn to community as a form of security. As Freie (1998) stated, we turn to community as a means to somehow solve the social problems leading to our apparent demise. But risk always resides on the other side of security. In a world of complexity, uncertainty is the norm. “Lacking genuine community, yet longing for the meaning and sense of connectedness that it creates—the feeling of community—people become vulnerable to even the merest suggestion of community.” (Freie 1998:2). The community effect in rural areas is to help people find a place in this world somewhere between risk and security.

## References

Barbesino, Paulo 1997. "Towards a Postfoundational Understanding of Community." *Kybernetes* 26(6):689-702.

Bernard, Jessie 1973. *The Sociology of Community*. Glenview, Illinois: Scott, Foresman and Company.

Boudon, Raymond 1984. *Theories of Social Change: A Critical Appraisal*. Cambridge: Polity Press.

Buckley, Walter 1998. *Society---A Complex Adaptive System*. Canada: Gordon and Breach Publishers.

Bunce, Michael 2001. Keynote presentation, *In Search of ... Sustainability, Rurality, and Community*, Rural Studies Conference, University of Guelph, October 21, 2001, Guelph, Ontario.

Cohen, Anthony P. 1985. *The Symbolic Construction of Community*. New York: Ellis Horwood Limited and Tavistock Publications Limited.

Connell, David J. 2000 (unpublished). *Re-Formulating Community as a Complex Social System*. Qualifying Exam. Available at <http://www.djconnell.ca>

Cooley, Charles Horton 1929. *Social Organisation: A Study of the Larger Mind*. New York: Charles Scribner's Sons.

Eve, Raymond A., Sara Horsfall, and Mary E. Lee 1997. *Chaos, Complexity, and Sociology: Myths, Models, and Theories*. Thousand Oaks: Sage Publications.

Freie, John F. 1998. *Counterfeit Community: The Exploitation of Our Longings for Connectedness*. Lanham, Maryland: Rowman & Littlefield Publishers, Inc.

Fuchs, Stephan 1988. "Translation and Introduction" to "Tautology and Paradox in the Self-descriptions of Modern Society." *Sociological Theory* 6(Spring):21-37.

Knodt, Eva M. 1995. "Foreward" in Niklas Luhmann *Social Systems*. Stanford, CA: Stanford University Press.

Krannich, Richard S. and Thomas R. Greider 1990. "Rapid Growth Effects on Rural Community Relations," in Luloff, A.E. and Louis E. Swanson (Eds.), *American Rural Communities*. Boulder: Westview Press.

Kuhn, Thomas 1970. *The Structure of Scientific Revolutions*.

Laxer, George 1995. "Introduction." *The Canadian Review of Sociology and Anthropology (Special Issue: Globalisation)*. 32.3 (August).

Luhmann, Niklas 1979. *Trust and Power*. Great Britain: John Wiley & Sons Ltd.

Luhmann, Niklas 1982. *The Differentiation of Society*. New York: Columbia University Press.

Luhmann, Niklas 1986. *Love as Passion: The Codification of Intimacy*. Great Britain: Polity Press.

Luhmann, Niklas 1988. "Tautology and Paradox in the Self-descriptions of Modern Society." *Sociological Theory* 6(Spring):21-37.

Luhmann, Niklas 1989. *Ecological Communication*. Cambridge, MA: Polity Press.

Luhmann, Niklas 1995. *Social Systems*. Stanford, CA: Stanford University Press.

Marion, Russ 1999. *The Edge of Organization: Chaos and Complexity Theories of Formal Social Systems*. Thousand Oaks, CA: Sage Publications, Inc.

Moffitt, Leonard Caum 1999. "A Complex System Named Community." *The Community Development Society*. Pp 232-242.

Price, Bob 1997. "The myth of postmodern science," in Eve, Raymond A., Sara Horsfall, and Mary E. Lee, *Chaos, Complexity, and Sociology: Myths, Models, and Theories*. Thousand Oaks: Sage Publications.

Rees, William 2001. *The Economic Costs of Globalization*. Caledon Countryside Alliance Speaker Series, Caledon, Ontario, September 28, 2001.

Segal, Lynn 2001 Second Edition (1986). *The Dream of Reality: Heinz von Foerster's Constructivism*. Norton, NY: Springer-Verlag New York, Inc.

Stein, Maurice R. 1960. *The Eclipse of Community*. Princeton: Princeton University Press.

Turner, Frederick 1997. "Foreword: chaos and social science," in Eve, Raymond A., Sara Horsfall, and Mary E. Lee, *Chaos, Complexity, and Sociology: Myths, Models, and Theories*. Thousand Oaks: Sage Publications.

Umpleby, Stuart A. 2001. "What Comes After Second Order Cybernetics?" *Cybernetics and Human Knowing*. 8(3):87-89.

Warren, R.L. 1978. *Perspectives on the American Community*. Chicago: Rand McNally & Company.

Warren, R. L. 1963. *The Community in America*. Chicago: Rand McNally & Company.

Wellman, Barry, Peter J. Carrington, and Alan Hall 1988. "Networks as Personal Communities." In Wellman, Barry and S. D. Berkowitz, *Social Structures: A Network Approach*. Cambridge, MA: Cambridge University Press.

Wilkinson, Kenneth P. 1970. "The community as a social field." *Social Forces*. 48(3):311-322.

Wilkinson, Kenneth P. 1991. *The Community in Rural America*. Westport, CT: Greenwood Publishing Group, Inc.

Willis, Cecil L. 1977. "Definitions of Community II: An Examination of Definitions of Community Since 1950." *The Southern Sociologist*, 9 (1) fall, 14-19.