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In the fall of 1989, I attended the Peirce Sesquicentennial International Congress held at Harvard University in Cambridge, Massachusetts. The Sesquicentennial was a celebration of the diverse contributions of Charles Sanders Peirce to the natural and social sciences. Appropriately, the program was extremely varied and the topics ranged from logic, the philosophy of science, semiotics, metaphysics, epistemology, aesthetics, ethics, psychology, linguistics, geology, and religion. Although I had heard of Peirce, until this conference I had no real understanding of the breadth of his scholarship and little appreciation of his role in the founding of modern semiotics. After the Congress, I began to read everything I could find on Peirce, and to discuss the significance of his insights for anthropology and archaeology with my colleagues in the Department of Anthropology at Harvard, Terry Deacon, David Rudner, and Rosemary Joyce.

This book project has had a long gestation. I originally broached the idea of writing a book on archaeological interpretation with John Davey, the social science editor of Basil Blackwell, during my sabbatical at Churchill College, Cambridge University in 1990. However, my Brook Farm Archaeological Project with Steven Pendery, my collaborative research with the Pueblo de Cochiti, and a number of other writing projects intervened. This book, therefore, is not the one that I would have written in 1990 and this is certainly a good thing. The Peircian approach is now well established in anthropology and there are many new examples to draw from to illustrate this fact. In addition, I have now had the time to explore in my own field projects just how Peircian semiotics can “make a difference” in archaeological interpretation.

When I moved from Harvard to the University of Pennsylvania in 1995, I joined an Anthropology faculty well versed in Peircian semiotics. My colleagues included
Greg Urban, John Lucy, Webb Keane, and Asif Agha. Inspired by our discussions, I taught a graduate seminar on contemporary archaeological theory in the spring of 2000 where I devoted half the seminar to archaeological semiotics. During this time, I also directed a reading course with my graduate student Alexander Bauer and we began collaborating on several papers and writing projects. I also worked with Patricia Capone on a study of Pueblo ceramics, which emphasized the semiotic aspects of interpretation.

I began working on this book in the summer of 1996 in Pomfret, Vermont. I am especially grateful to Tom Hotaling whose farm provided a remarkably tranquil setting for writing and thinking. I completed the book during the summer of 2005 at the School of American Research in Santa Fe, New Mexico where I was an Ethel-Jane Westfeldt Bunting Summer Fellow. I would like to thank George Gumerman, the interim president, James Brooks, the current president, Nancy Owen Lewis, the director of programs, Laura Holt, the librarian, and the entire staff for providing everything a scholar could want. At Penn, I would like to thank Gregory Possehl and Greg Urban, the past and present chairs of the Department of Anthropology, as well as Jerry Sabloff and Richard Leventhal, the past and present directors of the University Museum, for their support. I also am grateful to my students, Alex Bauer, Matthew Liebmann, and Craig Cipolla, for their critical advice on semiotic issues and their help with various stages in the production of this book. At Blackwell, I would like to thank Tessa Harvey, Angela Cohen, Ali Wyke, and Jenny Howell for their help in bringing this project to completion.

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CHAPTER 1

Introduction

Archaeology studies all changes in the material world that are due to human action – naturally, in so far as they survive. The archaeological record is constituted of the fossilized results of human behaviour, and it is the archaeologist’s business to reconstitute that behaviour as far as he can and so to recapture the thoughts that behavior expressed.

V. Gordon Childe (1956:1)

In his books, *The Order of Things* (1970), *The Archaeology of Knowledge* (1973), and *Discipline and Punish* (1979), Michel Foucault uses the word “archaeology” in a distinctive manner. In addition to referring to the eponymous discipline, he uses it to describe a method of analysis appropriate for the human sciences. This analysis involves determining the discursive practices associated with the historical development of each episteme or intellectual sphere. These discursive practices refer to the complex and largely hidden interrelations between institutions, techniques, social groups, and perceptual modes. The analysis also requires revealing how the configurations of these discursive practices are radically different from those of the sciences. For Foucault, “it is useless, then, to say that the ‘human sciences’ are false sciences; they are not sciences at all” (Foucault 1970:366). He immediately notes that this status should not be interpreted as some kind of deficiency or an obstacle to research. Rather, what we call the human sciences constitute distinctively different configurations of knowledge.

Foucault’s use of the term archaeology and his analysis of the human sciences raises interesting questions for the field of archaeology. What might an archaeology of archaeology look like? One way to begin our investigation is to start with the epistemological standing of Anglo-American archaeology. Is it a natural
science like physics or chemistry? Is it a social science like cultural anthropology and sociology? Is it a humanity like English literature and art history? Or is it something else? Perhaps a hybrid of all three? Related to these questions are a series of other questions regarding archaeology’s representational practices. Is there a single “grand theory” for archaeology similar to the Unified Field Theory of physics, the New Synthesis in evolutionary biology, or the Universal Grammar of linguistics, that is applicable to all cultural contexts past and present? Or, are there multiple “little theories,” each of which is appropriate to specific historical contexts? And, if the latter is the case, how do these different theories articulate with one another? What resolutions are possible and appropriate when they appear to come into conflict?

In the modern era, archaeologists have offered a multiplicity of responses to these questions. These responses have tended to be structured by the disciplinary distinctions between anthropology and history as they have been articulated on either side of the Atlantic. American scholars, like Gordon Willey and Philip Phillips (1958), Lewis Binford (1962), James Deetz (1967), and William Longacre (1970), have argued that archaeology is part of anthropology. British scholars, such as Stuart Piggott (1959), Glyn Daniel (1964), and Ian Hodder (1982b), have generally regarded it as a historical discipline. A small number of scholars, particularly David Clarke (1968), a British archaeologist, and Michael Schiffer (1976), an American archaeologist, have held that archaeology is a distinctive field of study in its own right, capable of producing its own laws and theories.

The controversy over the disciplinary status of archaeology continues to this day (e.g., Gillespie and Nichols 2003; Hodder 2005). And yet, however much these approaches may diverge, all of them share something in common: the view that the defining characteristic of the field is the study of material culture.

In this book, I intervene in this debate in two ways. I begin by rejecting the artificial oppositions between different kinds of disciplines which, in the end, are the result of historical and political factors. To do this, I argue that archaeology is a semiotic enterprise. This assertion, while perhaps not familiar to many archaeologists, is not particularly novel. All academic disciplines can be seen as semiotic enterprises. This is because all disciplines must attend to the linkages between their theories, data, and social practices in the pursuit of meaning. It can be argued that all archaeologists of whatever theoretical persuasion, be they processualists, behavioralists, selectionists, agency theorists, feminists, indigenous archaeologists, and so on, make use of the same procedures of logical reasoning in giving meaning to the past. To be sure, this claim can be seen as a kind of unification thesis. Some colleagues, who worry that unification is a technology of power, may even find it troubling. But, as Ian Hacking (1996) points out, there are different kinds of unification. Unification at the cognitive level does not necessarily entail unification.
at the interpretive level. It is thus possible, and indeed highly desirable, to foster theoretical disunity within semiotic unity.

It is surprising that so few archaeologists have engaged with the literature on semiotics, the multi-disciplinary field devoted to how humans produce, communicate, and codify meaning. The term “semiotics” appears in none of the recent overviews of archaeological method and theory (e.g., Bintliff 2004; Hodder 1999; O’Brien et al. 2005; Preucel and Hodder 1996; Renfrew and Bahn 2000; Ucko 1995; Willey and Sabloff 1993). One reason for this neglect may be the perception that semiotics is now “passé” or out-of-date because of its intimate association with structuralism. This view may be enhanced by the fact that there are now several critiques of structuralism and various poststructuralist agendas are emerging within postprocessual archaeologies. Ian Hodder (1982b:8), for example, has identified the problems of structuralism as including the lack of a theory of practice, the limited role of the individual, the absence of an adequate model of change, and the problem of verification. For Christopher Tilley (1999:3), structuralism has been superceded by a growing interest in various forms of discourse theory, including rhetoric and linguistic tropes.

Another reason for the lack of engagement may be the close association of semiotics with literary theory, a field that some archaeologists regard as having limited application to the study of material culture. For example, Lewis Binford (1987:402), a leading processual archaeologist, has labeled postprocessualists as “textual-contextualists” and critiqued them for “adopting an approach that assumes that all artifacts are symbols and are direct semiotic evidence, or, in a more structuralist posture, present themselves as clues to the intellectual determinants of the ancients’ behavior.” Matthew Johnson (1999:226), a leading postprocessualist, has held that text metaphor is flawed since it depends upon a perceived cultural proximity, the lack of difference between the past and our own present. Both of these critiques have some valid points and thus my goal is to present an argument for a specific kind of semiotics.

The dominant approaches to semiotics in archaeology today are those offered by postprocessual and cognitive archaeologists. These are all, in one form or another, derived from the writings of Ferdinand de Saussure and the various revisions made by his structuralist and poststructuralist followers. I contend, along with many other scholars (e.g., Gottdeiner 1995; Keane 2003; Parmentier 1997), that the Saussurian model, by itself, cannot provide an adequate account of material culture meaning. This is because of its flawed characterization of the sign and its focus on codes and rules at the expense of social practice. These limitations thus pose as much a problem for Colin Renfrew (1994a) and his cognitive archaeology program, as it does for Tilley (1991, 1999) and his celebration of ambiguity and metaphor.
I, therefore, advocate an alternative semiotic approach based upon the work of Charles Sanders Peirce (Gardin 1992; Knappett 2005; Lele 2006; Preucel and Bauer 2001). Such an approach requires identifying the different kinds of signs that humans use in the semiotic mediation of culture. Here Peirce’s tripartite notion of the sign relation and his famous distinction between icon, index, and symbol are especially relevant. This approach also highlights how different cultures deploy specific signs and sign combinations toward particular semiotic ends. Certain meanings are given preeminent status in the negotiation of power relations and these can be seen as semiotic ideologies (Keane 2003). Finally, this approach involves acknowledging that archaeological interpretation is itself a social semiotic act. This fact implies that our collective interpretations are, and always will be, partial and provisional. It does not imply, however, that everything is relative or that there is no growth of archaeological knowledge. As Peirce argues, science is a social phenomenon and the conception of reality “essentially involves the notion of community, without definite limits, and capable of an indefinite increase of knowledge.” (Peirce Edition Project 1984:239, his emphasis).

My second intervention in this debate involves reconsidering material culture as social practice. I suggest that archaeology’s longstanding interest in material culture needs to be augmented by a focus on materiality. The distinction between material culture and materiality is crucial. Material culture can be defined as the manifestation of culture through material fabrications. As Henry Glassie (1999:41) puts it, material culture is “the tangible yield of human conduct.” The standard view, embodied in Childe’s quote at the beginning of this chapter, is that material culture stands for beliefs, thoughts, and behavior. Jules Prown (1993:1) offers a concise contemporary statement of this position, “human made objects reflect, consciously or unconsciously, directly or indirectly, the beliefs of the individuals who commissioned, fabricated, purchased, or used them and, by extension, the beliefs of the larger society to which these individuals belonged.” There is thus an inherent semiotic dimension to the study of material culture since, as a product of human activity, material culture must always signify something other than itself.

This view of the artifact as a “mirror of man” was challenged by Ian Hodder (1982c) in the context of his ethnoarchaeological study of social groups and boundaries in the Baringo district of Kenya. He originally sought to identify the spatial patterning of material culture and determine how it correlated with ethnic groups. What he found was considerable variability expressed at several different scales. In the Lozi kingdom, for example, status groups actively used material culture to establish their authority while within Lozi households family tensions were supported and continued by means of particular kinds of pottery decoration. He concluded, “whether an artifact does or does not ‘reflect’ a particular type of
interaction or information flow depends on how it comes to be used as part of the strategies and ideologies of particular groups” since “individual artifact types may be used to emphasise or deny, to maintain or disrupt, ethnic distinctions or networks of information flow” (Hodder 1982c:85). Material culture is thus not a passive reflection of human behavior, but rather an active social practice constitutive of the social order.

This is an extremely valuable insight, but it begs the question of how and why specific meanings come to be regnant in particular social contexts. Subsequent studies of meaning have tended to get caught up in the “style debates” (Hegmon 1992). It can thus be argued that material culture has not been adequately theorized. There have been very few considerations of the “socialness of things” and how they transform culture by their multiple imbrications in regimes of value. These issues are the subject of new studies of materiality in social anthropology (Appadurai 1986b; Buchli 2002; Gell 1998; Miller 2005; Myers 2001) and are now being explored in archaeology (Chilton 1999; Meskell 2004; Orser 1992; Tilley 1999). Materiality, or material agency, can be defined as the social constitution of self and society by means of the object world. As Lynn Meskell (2004:28) perceptively notes, it “links both to the radical ideas of mimesis, simulacra, and agency and to the more mundane notions of goods, services, and economic structures.” A focus on materiality demands that we consider the myriad ways in which material culture mediates social being. We thus need to shift our focus away from material culture per se toward the whole range of material engagements with the world. An archaeology so constituted is especially well positioned to contribute to a fuller understanding of cultural semiosis.

What is Semiotics?

Semiotics can be defined as the field, multidisciplinary in coverage and international in scope, devoted to the study of the innate capacity of humans to produce and understand signs. What are signs? Signs are such things as ideas, words, images, sounds, and objects that are multiply implicated in the communicative process. Semiotics thus investigates sign systems and the modes of representation that humans use to convey their emotions, ideas, and life experiences. Semiotic analysis, in various forms, is widely used today in a broad range of disciplines, including anthropology, architecture, art, communications, cultural studies, education, linguistics, literature, political science, sociology, and psychology.

Semiotic issues have occupied scholars since antiquity (Clarke 1990; Nöth 1990). Plato, for example, held that verbal signs are only incomplete representations of the true nature of things since the realm of ideas is independent of its
representation by words. Aristotle recognized the instrumental nature of the linguistic sign, observing that human thought proceeds by the use of signs and that spoken words are the symbols of mental experience. The Stoics distinguished the thing signifying (semeion) from the thing signified (semeionomenon). The former was immaterial and separate from the existing object. Medieval scholars, such as William of Ockham, considered the concepts of sign and signification to be fundamental to logic (Tabarroni 1989). Ockham redefined the sign by introducing the concept of supposition. This move allowed him to reformulate traditional ontological issues, such as the questions of universals, the number of categories, and the ontological status of relations, as semantic questions.

John Locke, who coined the term “semiotics” from the Greek, was the first scholar to establish semiotics as a scientific discipline. In *An Essay Concerning Human Understanding* (1993:414–415) published in 1690, he considered it one of the three branches of science. He defined physics (phusike) as “the knowledge of things, as they are in their own proper beings, their constitution, properties, and operations,” practice (pratike) as “the skill of right applying our own powers and actions, for the attainment of all things good and useful,” and semiotics (semeiotike) as “the doctrine of signs; the most usual whereof being words, it is aptly enough termed also logic (logike).” He regarded logic as the study of “the nature of signs, the mind makes use of for the understanding of things, or conveying its knowledge to others.”

Modern semiotics began in the 19th century and most scholars identify two distinct intellectual trajectories. The first of these might be termed “linguistic” and is due to the work of the Swiss linguist, Ferdinand de Saussure. The second trajectory can be considered “philosophical” and is associated with the writings of American philosopher, Charles Sanders Peirce. Of these two trajectories, the Saussurian approach is best known and has been the most influential across the humanities, social sciences, and natural sciences. This situation is due largely to the inaccessibility of the majority of Peirce’s writings (see Chapter 3). It is, therefore, semiotics in its Saussurian manifestation that has given rise to structuralism and the so-called “linguistic turn” in the human sciences.

Saussure coined the word “semiology” (sémiologie) to refer to “a science that studies the life of signs within society” (Saussure 1966:16). He proposed that the true nature of language systems could only be revealed by studying what they share in common with all other semiologic systems. “By studying rites, customs, etc., as signs, I believe that we shall throw new light on the facts and point up the need for including them in a science of semiology and explaining them by its laws” (Saussure 1966:17). For Saussure, linguistics was just one branch of this general science, albeit the most complex and universal of all representational systems. Because of this characteristic, he argued that linguistics can serve as
“the master-pattern for all branches of semiology” (Saussure 1966:68). Saussure did not himself pursue these other branches of semiology and instead devoted his efforts to the study of language as a structured system.

Peirce, in contrast, defined “semiotics” as the science devoted to the “essential nature and fundamental varieties of possible semiosis” where semiosis is understood as “the nature of signs” (Peirce Edition Project 1998:413). Following the trivium of grammar, logic, and rhetoric of the ancient Romans, he distinguished three branches of semiotic—speculative grammar,” “speculative critic,” and “speculative rhetoric” (Peirce Edition Project 1998:327). Here the term “speculative” can be understood as being equivalent to “theoretical.” Speculative grammar thus refers to the study of “the ways in which an object can be a sign”; speculative critic refers to “the ways in which a sign can be related to the object independent of it that it represents”; and speculative rhetoric refers to “the essential conditions under which a sign may determine an interpretant sign of itself and of whatever it signifies, or may, as a sign, bring about a physical result” (Peirce Edition Project 1998:326, 327).

Semiotics emerged as a major focus in literature and cultural studies in the 1970s and 1980s. This can be largely attributed to the influence of the writings of Roland Barthes and Claude Lévi-Strauss some ten years earlier. In 1957, Barthes (1972) published Mythologies, his critique of bourgeois ideology. After completing it, he wrote that

it was then that I first read Saussure; and having read Saussure, I was dazzled by this hope: to give my denunciation of the self-proclaimed petit-bourgeois myths the means of developing scientifically; this means was semiology or the close analysis of the processes of meaning by which the bourgeoisie converts its historical class-culture into universal nature; semiology appeared to me, then, in its program and its tasks, as the fundamental method of an ideological critique (Barthes 1988:5).

Barthes followed up Saussure’s idea of the semiotic study of cultural practices and published on a variety of topics including literature, art, music, and fashion (Barthes 1977, 1990).

Lévi-Strauss’s interest in semiotics dates to the period before the Second World War when he lived in New York City and taught at the Free School of Advanced Studies (now the New School). Lévi-Strauss was introduced to structural linguistics by Roman Jakobson, his colleague and fellow émigré from Europe. By 1960, he regarded semiotics as central to his program of structural anthropology. In his inaugural address to the Collège de France, he explicitly defined anthropology as a subset of semiology. He stated, “we conceive anthropology as the bona fide occupant of that domain of semiology which linguistics has not already claimed for its own, pending the time when for at least certain sections of this domain, special
sciences are set up within anthropology” (Lévi-Strauss 1976:9–10). Lévi-Strauss applied his approach to the study of kinship, mythology, totemism, and history (Lévi-Strauss 1963, 1976).

In the last decade or so, semiotics has undergone a significant transformation. The field has moved away from the study of sign systems and their classification toward the study of the modes of production of signs and meanings as they are enacted in social practice. This new approach has been called “social semiotics” or “sociosemiotics” (Gottdeiner 1995; Hodge and Kress 1988; Jensen 1995; Lemke 1995; Thibault 1991, 1997). It focuses on human meaning making practices across verbal, visual, bodily, and other semiotic modalities, and their co-deployment. As Thibault (1991) argues, the basic premise is that meanings are made by construing semiotic relations among patterned meaning relations, social practices, and the physical-material processes which social practices organize and entrain in social semiosis. In social semiotics, the basic logic is that of contextualization. No semiotic form, material entity or event, text, or action has meaning in and of itself. The meanings are made in and through the social meaning-making practices which construct semiotic relations among material processes and social actions. All communities have regular and repeatable patterns of meaning-making. These patterns are thus typical of that community and help to define and constitute it, as well as to distinguish it from other communities.

Yet another important development in semiotics is biosemiotics. This subfield can be defined as the study of living systems from a semiotic perspective. Thomas Sebeok (1979) has identified the origins of biosemiotics in the work of the German biologist Jakob von Uexküll, who was one of the founders of ethology in the first half of the twentieth century. Sebeok (1986) coined the term zoosemiotics to describe the study of animal behavior in 1986. According to biosemiotics, all processes occurring in nature at whatever level, from the single cell to the ecosystem, can be analyzed in terms of sign-processes. All organisms exist within a semiosphere, which can be defined as a world of meaning and communication involving the mastery of a set of visual, acoustic, olfactory, tactile, and chemical signs (Hoffmeyer 1998). The semiosphere contains a variety of semiotic niches which are occupied by different populations depending upon their biological characteristics. From this perspective, the evolution of life is associated with the development of increasingly sophisticated means for surviving in the semiosphere.

Archaeology and Semiotics

Archaeology’s relationship with semiotics began in the 1960s with the structuralist encounter (Chapter 5). André Leroi-Gourhan (1965, 1968) and Annette
Laming-Empèraire (1962) in France and James Deetz (1967) in the U.S. were among the first archaeologists to apply the linguistic model to archaeological data. Their influence, however, was limited to Paleolithic archaeology and historical archaeology respectively. Margaret Conkey (1978), John Fritz (1978), and Dorothy Washburn (1977) revived structuralism in the context of their engagement with systems theory and information exchange models. This form of structuralism, however, bore only a loose relationship with linguistics. It wasn’t until the early 1980s that Ian Hodder reintroduced a recognizably linguistic structuralism, together with its poststructuralist critiques, as the theoretical basis for post-processual archaeologies. As Michael Shanks (1990:299) writes, postprocessual archaeology mounted an attack on processual archaeology “on the philosophical grounds of semiotics and the theory of discourse.” In the following section, I chart the influence of semiotics on archaeological interpretation through a sampling of professional seminars and conferences.

In 1979, Hodder and his students at Cambridge University organized a series of seminars culminating in a conference entitled “Symbolism and Structuralism in Archaeology.” The participants included Hodder and 12 graduate students, many of whom have now gone on to become leaders in postprocessual archaeology and postmodern anthropology. In his preface to Symbolic and Structural Archaeology, Hodder (1982b) noted that there was a clear sense of what was wrong with existing processual approaches, but no clear consensus as to where to go. The conference was, therefore, a series of trial explorations of theories of practice, structuration theory, semiotics, gender, and ideology. Left unresolved, however, were several questions regarding verification and the relationships of meaning and symbolism.

Two contributions explicitly raised aspects of semiotics. Daniel Miller (1982, 1985) drew on semiotics to offer a critique of structuralism and functionalism. He questioned whether “the division within linguistics of syntax, semantics and pragmatics, which is in any case hard to maintain, would be at all plausible in the study of material forms, and the actual use of any such ‘grammar’ would probably be limited in archaeology and social anthropology to the study of formal systems such as designs” (Miller 1982:21). He then critiqued functionalism arguing that function is not absolute, but rather reflects conventional needs and desires. Here he employs Saussure’s langue and parole distinction and argues that while the rules of structural generation are subject to generalization, the specific results of productive activity are not. This, therefore, invalidates the use of functionalism. He then calls for an approach to categorization that links langue and parole in order to provide a realist explanation of the past.

Alison Wylie discussed semiotics in the context of evaluating the linguistic model. She suggests that material culture does not produce “meaning effects” in the sense of conveying specific messages of states of mind similar to sentences
or speech acts (Wylie 1982:40). That is to say, there is greater ambiguity involved in interpreting material culture meanings than there is in interpreting linguistic ones. Given this situation, Wylie proposed that material culture may not be intended to produce the same level of specificity. For her, the linguistic analogy holds primarily at the level of the encoding process and meanings and a mediating competence may govern the structuring of material culture. She concluded on a cautious note observing that additional work is needed to develop methodological procedures that address cognitive, semiological, and symbolic aspects of material culture.

The first major assessment of the relationships of semiotics and archaeology occurred at the 5th International Institute for Semiotic and Structural Studies in 1983. This conference was organized by Michael Herzfeld and held at Indiana University in Bloomington. Jean-Claude Gardin of the Centre National de la Recherche Scientifique (CNRS) gave a series of lectures entitled “Semiotics and Archaeology.” These lectures focused on the nature of the artificial languages used in creating archaeological databases and the general operations carried out on these databases in order to facilitate archaeological interpretation (Gardin and Peebles 1992b:2–3). Gardin (1980, 1987) has had a longstanding interest in metatheoretical issues in archaeology, such as categorization, artificial intelligence, and expert systems.

In 1986, Hodder organized a series of sessions on “Material Culture and Symbolic Expression” at the World Archaeological Congress in Southampton, England. The resulting publication contains contributions from 25 authors from Africa, Australia and Papua New Guinea, Eastern and Western Europe, India, North and South America, and the United Kingdom. Although Peter Ucko (1989:xiv) observed that many of the contributors regarded semiotics as the most important technique for decoding the rules and grammars of material culture expression, only a few explicitly addressed semiotic issues by name. Tilley, (1989a) for example, reviewed structuralism and poststructuralism in terms of the move from language to text. He holds that “each act of material culture production and use has to be regarded as a contextualized social act involving the relocation of signs along axes defining the relationship between signs and other signs which reach out beyond themselves and towards others becoming amplified or subdued in specific contexts” (Tilley 1989a:188–189). Ana Maria Llamazares (1989) provided a semiotic approach for the interpretation of rock art. Her premise is that rock art is structured as a communication system and that the individuals that produce it are expressing themselves through preexisting structures that are part of the communities to which they belong.

In the following year, Gardin, Herzfeld, and Christopher Peebles organized a Franco-American roundtable at Indiana University sponsored by CNRS and the
National Science Foundation. The roundtable was held from October 6–10, 1987 and 20 French and Anglo-American scholars participated. The topics covered included semiotic, symbolic, structural, and cognitive approaches, the philosophy of interpretation, and computer applications. These papers were subsequently published in *Representations in Archaeology* (Gardin and Peebles 1992a). Several of the papers address semiotic issues directly.

Jean Molino (1992), a semiotician, interpreted archaeological practices in terms of three complementary modalities. The first is an aesthetic dimension by which the archaeologist engages with the data and seeks to reconstruct the underlying phenomena. The second is the classification dimension used to produce symbolic models of the data and their organization. The third is the poetic dimension where meaning is produced as the archaeological traces are linked to human activities. He concludes that “it is this triple anchorage that links archaeology to the semiology of symbolic forms” (Molino 1992:27). Michael Herzfeld (1992) examined the constraints on archaeological inference. He suggests that interpretation is predicated on typological relationships based upon iconicity, or selective resemblance and spatial forms of indexicality that can be translated into temporal sequences. He then recommends that archaeology develop models that allow the archaeological record to be read through plausible indexical and iconic relations and accept that symbolic meanings may be inaccessible.

Gardin’s (1992) review of semiotic trends in archaeology is of particular interest. He identified three major intellectual trends – structuralism, logicism, and hermeneutics – that underlie interpretation. Structuralism involves making use of the methods of structural linguistics or structural anthropology, particularly as they have been developed by Saussure and Lévi-Strauss. Logicism is associated with the science of logic as devised by Charles Morris and Peirce. Hermeneutics focuses upon the actor as subject, the role of the interpretive community, and the generation of multiple perspectives. Gardin justifies placing these three very different approaches under a common semiotic heading on the grounds that they all address aspects of mental representation or “mentalities.” Structuralist archaeology investigates mental organizations that determine the behaviors of past groups, logicist archaeology seeks to approximate the worldviews which facilitate our interpretations in the present, and hermeneutic archaeology seeks to reveal the operation and meaning of symbolic systems in past societies. For Gardin (1992:94), the value of the semiotic perspective is twofold – it offers a kind of unity to the discipline and it allows for new understandings of the progress of archaeology.

In 1988, Ian Bapty, Tim Yates, Frederick Baker, and J. D. Hill organized a conference entitled “Discipline-Discourse-Power: The Cambridge Seminar on Post-Structuralism and Archaeology.” The conference, held over a three-day period, from June 29 to July 1, at Cambridge University, examined the impact
of poststructuralist thought on archaeology, specifically Jacques Derrida's theory of deconstruction. The conference generated considerable debate and some of the tensions are indicated by the fact that it resulted in two separate publications (Baker and Thomas 1990; Bapty and Yates 1990a). Sarah Taylor (in Baker et al. 1990:1) has called Baker and Thomas' volume a “salons des refusés” containing contributions the conference organizers felt fell outside the bounds of their poststructuralist agenda.

Several authors took critical stances on interpretation and indeed some question the very possibility of archaeology. Yates (1990), for example, challenged Hodder's idea of the archaeological record as text and his emphasis on context. He suggests that this approach depends upon the priority of the signifier and the role of context in closing off the chain of signifiers. However, he proposed that the past has a relative autonomy that requires that we retheorize past and present, silence and voice, self and other using psychoanalytic perspectives on the unconscious and conscious. He writes, “like Narcissus gazing into the pond, we mistake what is actually our own image for that of another, the self for other, out of a desire to break with that which imprisons us – within our own bodies, which is always our own space and our own time” (Yates 1990:159). Maley (1990) has argued that archaeology needs to embrace deconstruction even at the risk of undermining its most cherished assumptions about representation and culture. Similarly, Bapty (1990) has called for a return to innocence where finding meaning in the past does not depend upon some ultimate security. In his concluding commentary to *Archaeology After Structuralism*, Shanks (1990) leveled a series of rhetorical charges against the individual authors such as the fetishism of poststructuralist authors, making too much of theory, hypocrisy, political naiveté, elitism, and relativism. He then suggests that archaeology needs to take seriously issues of emotion, experience, creativity, and imagination.

In 1991, Ian Hodder, Michael Shanks, Alexandra Alexandri, Victor Buchli, John Carman, Jonathan Last, and Gavin Lucas organized a conference on archaeology and the interpretation of material culture at Peterhouse, Cambridge University (Hodder et al. 1995). Over 140 archaeologists from Britain, United States, Europe, Africa, India, Japan, and Australasia attended for the three days of meetings. Among the topics discussed was the applicability of the text idea for archaeology. Buchli (1995:183) raised a series of questions – does it refer to a semiotic system (Saussure), a structuralist system (Lévi-Strauss), a hermeneutic system (Gadamer and Ricoeur), or something else? Is text best conceived as a metaphor or an analogy? Criado (1995) critiqued the text metaphor in favor of a visual one characterized by strategies to inhibit, hide, exhibit, and monumentalize. Parker Pearson (1995) discussed the durability of material culture compared to text and the risks in fetishizing material objects and inappropriately attributing meaning to them.
Thomas (1995) accepted the text metaphor but advocated an approach that examines how things are incorporated into personal biographies and group myths in the production of identity.

More recently, in 2001, Alexander Bauer and Uzma Rizvi, graduate students at the University of Pennsylvania, organized a symposium at the Society for American Archaeology meetings in New Orleans entitled “Artifacts as Signs: Semiotic Approaches to the Study of Meaning.” The symposium, held on April 21, included papers by Jean-Claude Gardin and Christopher Peebles, Sarah Tarlow, Lawrence Coben, Uzma Rizvi, Giovanna Winchekler, Alexander Bauer and myself, and Margaret Conkey. Ian Hodder and Jean-Claude Gardin were the discussants. The session focused on exploring semiotics as a means of moving the debate over meaning forward and evaluating some of the ways in which material signs, such as objects, architecture, and landscape, are different from linguistic signs.

Two of the symposium papers have now been published. The first of these is my article with Bauer in which we develop an argument for a pragmatic archaeology based on Peircian semiotics (Preucel and Bauer 2001). We suggest that it helps us appreciate that all fields and indeed all knowledge-seeking activities share a common logical structure. We also propose that it has the potential to contribute to the current semiotic discourse on cultural pragmatics. Although much of this discourse has been taking place within the field of linguistic anthropology, archaeology’s focus on material culture well positions it to advance this developing dialogue. This is because material culture is tightly interwoven with language, and shares some of its semiotic properties. What makes material culture unique is its “materiality” and the ability of material meanings to be alternatively transformed or maintained over time depending upon context.

The second publication is Lawrence Coben’s (2006) study of Inka performance spaces and their role in imperial expansion and control using Peirce’s notion of a replica. He suggests that the Inka constructed Cuzco, their capital city, as a physical representation of their worldview. The Inka then replicated this city at strategic locations throughout their empire, thus expanding their control by making multiple Cuzcos. He suggests that one of the principle roles of these sites was to serve as the settings for a calendar of ritual ceremonies and spectacles that referenced certain repeated material attributes of these sites and were performed by and for an audience of the Inka. He also suggests that these Cuzco replicas were strategically placed in areas of war and rebellion where the utilization of ritual performance to maintain, reinforce, and manipulate Inka ideology and identity was a critical element of imperial strategy as the polity expanded from a single valley in highland modern Peru to encompass an empire extending from Ecuador to Chile.

This brief review of archaeology and semiotics highlights several key points. While archaeology has engaged with both Saussurian and Peircian versions, until
recently its most sustained focus has been on structuralism and its subsequent poststructuralist critiques. From the first Cambridge conference, there has been an emphasis on approaches that go beyond structuralism such as Giddens’s structuration theory and Bourdieu’s theory of practice. This has led to explorations of text, writing the past in the present, and rhetorical tropes and has even generated critiques which have questioned the very possibility of doing archaeology. As important as these approaches are, they have not adequately addressed the semiotic processes by which things come to mean what they do. They have not examined the multiple modes of sign relations enabling semiotic practices.

Theorizing Material Culture

One of the most exciting developments in contemporary anthropology is the revival of interest in material culture studies. There is a growing recognition that objects are not passive reflections of society, rather they are active participants in social practices that constitute selves and others (Appadurai 1986b; Hoskins 1998; Myers 2001). Significantly, postprocessual archaeology has played a key role in facilitating this reengagement. Daniel Miller, one of the leaders in the field, was one of Hodder’s students at Cambridge. Miller, along with Tilley and Victor Buchli, teaches at the University College, London, perhaps the leading center for material culture studies today. There are now several edited volumes that define the interests and agendas of this school (e.g. Buchli 2002; Miller 1998). UCL is also home to a new interdisciplinary Journal of Material Culture focusing on the role of artifacts in the construction of social identities and the production of culture.

An influential theoretical perspective informing contemporary material culture studies is objectification. This is the view that in making things people make themselves in the process. Borrowing the idea from Hegel, Daniel Miller (1987:33) suggests that objectification is the foundation for a dialectical theory of culture. It merges the subject/object and individual/society dualities by insisting that both pairs of oppositions are as much constitutive of culture as constituted by it. Because it is not merely reflective, Miller does not consider it to be a process of signification. He holds that “objectification is therefore an assertion of the non-reductive nature of culture as process” (Miller 1987:33). For Hegel, objectification involves externalization and sublation, processes by which self-alienation becomes the instrument of the historical making of culture. Miller proposes that more than self-alienation, praxis understood as material strategies based upon objective conditions is central. For example, he suggests that mass produced goods are the ways in which we create our identities and social affiliations in modern culture. The key issue is the
process of alienation by which goods become transmuted through consumption into desires.

A second approach is materialization. Elizabeth DeMarrais et al. (1996) have defined materialization in the context of elite ideology and power. They suggest it is related to the production, control, and manipulation of highly visible, elaborate symbols and icons, events and monumental architecture. DeMarrais (2004) has recently sought to extend the discussion beyond elite strategies suggesting that the materialization of ideology is part of a broader process – the materialization of culture. She draws attention to the idea of sedimentation whereby people make use of local knowledge to solve various problems. In some ways, this view recalls Judith Butler’s (1993:9) observation that the materiality of gender requires “a return to the notion of matter, not as site or surface, but as a process of materialization that stabilizes over time to produce the effect of boundary, fixity, and surface we call matter.”

Yet another influential direction is the social life of things approach. This approach includes both the “cultural biographies of things” and the “social history of things,” which can be differentiated with respect to temporality and scale (Appadurai 1986b:34). The cultural biography approach is the analysis of specific things as they are exchanged among people and accumulate biographies. The social history approach refers to whole classes of things that may shift in meaning over the long term. According to Appadurai (1986b) these two forms of object identity are interrelated since the social history of things constrains the cultural biographies of things. Most research has focused on commodity exchange within the cultural biography approach. Igor Kopytoff (1986), for example, has drawn attention to how commodities are perpetually subject to classifications and reclassifications in an uncertain world of categories. Charles Orser (1992) has used this approach in his study of slave material culture in plantation contexts. In addition to use and exchange value, he identified esteem value where the very presence of the object helps perpetuate certain ideas and beliefs. Here things have agency, not through consciousness, but by virtue of the effects they have on people.

All three of these approaches share a set of common problems. There is a rather loose use of the terms sign, symbol, and signification. Because of this, certain aspects of meaning are ignored, simplified, and, in some cases, misidentified. Miller implies that objectification is not a process of signification. DeMarrais argues just the opposite, but fails to provide an account of how the materialization process works. Appadurai identifies synchronic and diachronic axes of difference, but he neglects the semiotic modalities underlying meaning production. As Myers (2001:23) notes, things are objectifications or materializations in a more complex sense than the doctrine of the arbitrary sign would imply. The materiality of things is overdetermined and this allows things to mediate indexically social processes.
For this reason, we must explore indexicality more fully in developing a theoretical account of material semiosis.

Organization of the Book

This book is organized into three parts and these are best read in sequence to gain the greatest appreciation for the potentials of archaeological semiotics. Part I provides a general overview of the two main intellectual trajectories in modern semiotics and their impact on anthropology. I introduce Ferdinand de Saussure and the linguistic tradition in Chapter 2. Here I pay special attention to the dyadic concept of the sign, the principles of arbitrariness and linearity, and the ideas of value and meaning. I also review the influence of structuralism on linguistics in the form of Russian Formalism, the Prague Circle of Linguistics, the Linguistic Circle Copenhagen, and American Structural Linguistics. I then turn to a consideration of the relation of structuralism to structural, symbolic, and cognitive anthropologies. In Chapter 3, I discuss the semiotics of Charles Sanders Peirce and the philosophical tradition. I introduce his view of synechism and the pragmatic maxim which underlies his distinctive view of science. I also present the doctrine of categories, the triadic sign relations, and the ten sign typologies. I then consider his enduring influence on philosophy, linguistics, and biosemiotics. In Chapter 4, I characterize “pragmatic anthropology,” the field devoted to pragmatic view of culture and the study of the culturally specific ways in which sign relations mediate social being. This is an increasingly influential movement in cultural and linguistic anthropology that draws inspiration from Peircian semiotics. Here I discuss such topics as deitics, referential and nonreferential indexes, reported speech, linguistic ideology, social identity, and material meanings. Pragmatic anthropology provides an essential bridge between philosophy, linguistics, and archaeology.

Part II is a consideration of the three roots of a semiotic archaeology – structuralism, poststructuralism, and cognitive science. In Chapter 5, I review the history of processual archaeology with special attention given to its engagement with structuralism. I then discuss several key issues such as rules and codes, information exchange, and structural Marxism. In Chapter 6, I examine the relationships of poststructuralism and postprocessual archaeologies. I then discuss the shift from structuralism to practice theory, the idea of reading material culture, the material culture as text model, and the material metaphor approach. In Chapter 7, I provide a brief history of the relationships of cognitive science and cognitive archaeology. I review the two main approaches that can be broadly characterized as evolutionary and processual studies. This section demonstrates that semiotics is not limited to
postprocessual archaeology. Indeed, it is implicated in all theoretical approaches from processual and behavioral to cognitive and hermeneutic.

**Part III** is devoted to demonstrating the value of a Peircian semiotics to archaeology using two historical case studies. The first of these, in Chapter 8, is an analysis of semiotic ideologies at Brook Farm in West Roxbury, Massachusetts. Brook Farm was the site of the famous utopian experiment made popular by Nathanial Hawthorne (1852) in his novel the *Blithedale Romance*. My concern is to identify how architecture and the built environment mediated the different philosophies of Transcendentalism and Fourierism. The second case study, in Chapter 9, is a consideration of how Pueblo Indian people reconstituted their world following the Pueblo Revolt of 1680. Here I pay special attention to the semiotic deployment of rhetoric, settlement, architectural form, and pottery design as material practices that collectively enabled the Pueblo cultural revitalization movement.

Throughout the book, I have made liberal use of case studies. I have done this in the firm belief that examples are the best way to demonstrate complex theoretical ideas. This can be seen as a form of pragmatism because if theories cannot be shown to have an effect on the interpretation of actual data then they are indeed of limited value. I have also emphasized certain studies to highlight the numerous connections between the various chapters. For example, Roman Jakobson’s work on shifters (Chapter 3) was extremely influential for Michael Silverstein’s work on indexicality (Chapter 4). Similarly, Ian Hodder’s characterization of postprocessual archaeology (Chapter 5) was important in Colin Renfrew’s development of cognitive archaeology (Chapter 7). Richard Parmentier’s discussion of temporal modalities in Belau (Chapter 4) is significant in my own Pueblo Revolt case study (Chapter 9).

At the end of this book, I hope the reader will have developed some familiarity with a series of questions about the interrelationships between semiotics and archaeology. What is modern semiotics and what are its historical roots in linguistics and philosophy? How has semiotics been developed within anthropology and its subfields of linguistic, cultural, and biological anthropology? What are the relationships of semiotics to processual and postprocessual archaeologies? What are the relationships of semiotics to the recent moves toward a cognitive archaeology? Is the linguistic model an appropriate model for the study of non-linguistic objects (e.g., sites, landscapes, monuments, artifacts)? How do the processes of objectification, materialization, and the social life of things work? Is it possible or desirable to construct a comprehensive or universal theory of material culture meanings? The exploration of these questions constitutes the domain of archaeological semiosis and forms the building blocks of a pragmatic archaeology.
PART I

Signs of Meaning
CHAPTER 2

Saussure and His Legacy

Ferdinand de Saussure is widely regarded as the father of modern linguistics and contemporary semiotics. Prior to his work, the study of Indo-European linguistics was dominated by a historical approach involving the construction of comparative grammars (Holdcroft 1991). This method consisted of explaining one language by reference to a related language and interpreting the forms of one in terms of the forms of the other. There was a general assumption of regular and continuous change. August Schleicher (1869), for example, held that languages were natural organisms and that they evolved through developmental stages much like the evolution of plant species. Saussure (1966:4) rejected this view saying that it assumed a “fourth natural kingdom” and paid insufficient attention to the units of analysis. He proposed that language could be studied scientifically and that changes in language are often discontinuous, but nonetheless subject to general laws. This approach has come to be called “structural linguistics.”

For Saussure, linguistics was a special case, albeit the most important one, within the broader semiological system. He conceived of the new science of semiology as related to social psychology and devoted to the investigation of the general principles of signs. With this conceptual shift, he established a unified discipline of broad theoretical scope and predicated upon the concept of the sign. In addition to language, he identified writing, sign language, Braille, symbolic rites, honorific speech, and military signals as other sign systems subject to semiological analysis. He further proposed that semiology could be applied to all of culture, “by studying
rites, customs, etc., as signs, I believe that we shall throw new light on the facts and point up the need for including them in a science of semiology and explaining them by its laws” (Saussure 1966:17).

Saussure has an enormous legacy that has transformed the humanities and social sciences. His approach was adopted and extended by Russian Formalists, the Prague Linguistic Circle, the Linguistic Circle of Copenhagen, and American Structural Linguistics. It received major support from Claude Lévi-Strauss who single-handedly developed the field of structural anthropology. This field has led, in turn, to the development of symbolic and cognitive anthropologies. Structuralism has been particularly influential in literary theory through the writings of Roland Barthes, Umberto Eco, and Jean Baudrillard. It has, however, been subjected to sharp criticism, most notably by Michel Foucault, Jacques Derrida, Julia Kristeva, Paul Ricoeur, and Pierre Bourdieu. Because so many of these scholars began their careers as structuralists or, at least, as scholars sympathetic to structuralism, these criticisms have carried particular force. Although structuralism no longer exists in its original form, it continues to be relevant today by virtue of its critique, commonly called poststructuralism.

Ferdinand de Saussure

Ferdinand de Saussure (Figure 2.1) was born on November 26, 1857 in Geneva, Switzerland to an academic family. His father, Henri de Saussure (1829–1905), was an eminent mineralogist and entomologist. His grandfather, Horace-Bénédict de Saussure (1740–1799), was a professor at the Academy of Geneva, who specialized in botany, physics, and geology and conducted fieldwork in the Swiss Alps. Saussure was the middle of three brothers, all of whom were interested in language. His older brother Léopold (1866–1925) wrote about language change in the colonial context and his younger brother René (1868–1943), a mathematician, published a series of articles on the reform of Esperanto.

Saussure attended the University of Geneva in 1875 intending to follow in his family’s tradition and study the natural sciences. He quickly found, after two semesters of chemistry, that his passion lay in comparative linguistics. In his early teens, he had been inspired by his neighbor and family friend Adolphe Pictet. Pictet (1859) was the author of two volumes on the origins of the Indo-Europeans in which he used characteristics of the Indo-European language to reconstruct features of material culture and social organization. This approach came to be called “linguistic paleontology.” Saussure decided to pursue the study of Indo-European languages and transferred to the University of Leipzig in 1876.
At this time, the Leipzig program, under the direction of Georg Curtius, was the leading program in comparative linguistics. Curtius and his students were known as the “neogrammarians” because of their vigorous commitment to a uniformitarian approach and their focus on understanding language change using modern data to explain the past. They challenged the popular idea of language developing on its own accord and instead regarded it as the product of a linguistic community. Although he certainly accepted some of their views, Saussure did not consider himself a neogrammarian. In particular, he was skeptical of the emphasis they placed on analogy in understanding language evolution, favoring the idea that it is only one aspect of interpretation.

Saussure spent much of his time at Leipzig refining his knowledge of Indo-European languages. He studied Iranian, Old Irish, Old Slavic, and Lithuanian and spent a semester at the University of Berlin in 1878–79 studying Sanskrit. During this period, he published his Mémoire sur le système primitif des voyelles dans les languages indo-européennes (Saussure 1879). This study was the first systematic analysis of the roots, accentuation, and vocalization of the Indo–European language and is today still regarded as a major contribution. Saussure chose a more restricted topic for his doctoral thesis, the genitive case in Sanskrit. In this work, he demonstrated the value of a synchronic and comparative approach. He completed his thesis in 1880.
Upon graduation, Saussure moved to Paris and took a position at the École Pratique des Hautes Études where he taught Sanskrit, Gothic, and Old High German as well as Indo-European philology. Here he found the climate much more congenial than the competitive atmosphere of Leipzig. He quickly developed a devoted student following and his professional reputation grew. He became the assistant secretary for the Linguistic Society of Paris in 1882 and oversaw the publication of the society’s *Memoires*. He was awarded the Chevalier de la Légion d’Honneur in 1891.

In the same year, Saussure accepted a professorship in the history and comparative study of Indo-European languages at the University of Geneva. He seems to have taken the position in part out of frustration with the French academic system. One of the requirements for his promotion was to become a French citizen. In addition, since Michel Bréal held the only professorship, his chances for a titled position were slim. At Geneva, Saussure taught Sanskrit and comparative grammar and was promoted to a professorship in 1896. In 1906, on the retirement of a colleague, the university asked him to take over responsibility for teaching a course on general linguistics. He agreed and taught a set of three lectures held in alternate years in 1907, 1908–09, and 1910–11. These classes are the basis for the famous *Cours de linguistique générale*. Saussure died in 1913 at the age of fifty-six.

Although Saussure had a successful academic career, his fame was achieved posthumously with the publication of *Cours* in 1916. Ironically, he did not write this book, rather it was edited by Charles Bally and Albert Sechehaye from notes taken by his students (Saussure 1916). The editors substantially influenced the manuscript because, in their words, they had to “weed out variations and irregularities characteristic of oral delivery, then to fit the thought into its natural framework and present each part of it in the order intended by the author even when his intention, not always apparent, had to be surmised” (Saussure 1966:xix).

Thus, the *Cours* is a complex, multi-authored work; it is simultaneously the product of Saussure’s ideas as presented in his Geneva lectures, as they were documented in the notebooks of his students, and as they were interpreted by his editors. It seems likely that some of the persistent problems of interpretation stem from this complexity.

There are two main English translations of the *Cours*. The first was provided by Wade Baskin in 1959 and reissued in 1966 (Saussure 1959, 1966). The second was translated by Roy Harris and published in 1983 (Saussure 1983). Tullio de Mauro published an annotated version in 1972 (Saussure 1972). There are now bilingual editions of the first course by Eisuke Komatsu and George Wolf (Saussure 1996), the second course by Komatsu and Wolf (Saussure 1997), and third course edited by Komatsu and Harris (Saussure 1993). Various additional Saussure materials have
emerged over the years and are held by the Bibliotheque Publique et Universitaire de Geneva. The Bibliotheque also received some of Saussure’s unpublished manuscripts from his sons in 1955, Emile Constantin’s notes on the third course in 1958, and Albert Riedlinger’s notes on the first and third courses in 1979. These papers have now been collated and edited by Robert Godel as *Cahiers Ferdinand de Saussure* (Saussure 1957) and by Rudolf Engler (Saussure 1968, 1974). Bouquet and Engler have edited a set of papers and published them as *Ecrits de linguistic générale* (Saussure 2002).

**Semiology and Structural Linguistics**

Saussure defined linguistics as the scientific study of human language in all its varied manifestations. He divides the field into two parts. The first part, and the most essential one according to Saussure, is language itself, which is a collective phenomenon. “Language exists in the form of a sum of impressions deposited in the brain of each member of the community, almost like a dictionary of which identical copies have been distributed to each individual” (Saussure 1966:19). It exists in a realm that is beyond the ability of any one individual to effect change. This is what he calls the language system. The second part of linguistics is speech, which is an individual phenomenon. It is the aggregate of what people say and includes both word choices and acts of phonation. This is the psychological–physical process of articulation. These two components of language are closely interrelated with each presupposing the other. Indeed, as Saussure (1966:19) noted, language is both the instrument and product of speech.

Saussure (1966:6) identified the scope of linguistics as threefold. First, it seeks to describe and trace the history of all known languages, which involves documenting the history of language families and reconstructing their mother languages. Second, it aims to determine the selective forces that are universally at work in all languages, and to deduce the general laws to which all specific historical phenomena can be reduced. Finally, linguistics attempts to establish itself as a science. Saussure observed close connections between linguistics and other sciences and noted that the boundaries between them are not always easy to draw. Among these are anthropology, ethnography, and prehistory, all of which use linguistic data. He speculated that linguistics should have relationships with sociology and especially social psychology. There is an established relationship with physiology, although this is unidirectional. This is because physiology fully accounts for the mechanics of sound production without the aid of linguistics.

Saussure’s structural linguistics must be understood as emerging from his critique of the conventional belief that language is a nomenclature. Nomenclaturism
is the view that a language consists of a collection of words which are simply labels of independently identifiable things, usually an object, an action, or a state of being. Each word, in turn, consists of a group of letters and is commonly regarded as expressing a unique meaning. Saussure countered this position arguing that the word is not composed only of written letters. Rather, it consists of sounds that are spoken. Letters are, therefore, secondary signs of sounds. Moreover, these sounds are not determinative of meaning, although they may indicate dialectical differences. They are simply the physical manifestations of a cognitive image or sound pattern. This implies that language is a structured system of differences.

Nomenclaturism also assumes that meanings preexist language. They have an ontological existence, as it were, and it is only through language that we discover them. Cultural variation in languages is due to different cultures identifying these meanings and encoding them with distinctive sound patterns. On this view, language is a device for naming and classifying the pre-given world into natural kinds. Saussure challenged this position and argued that appropriate interpretation depends upon a word’s specific context within a written sentence or in spoken discourse. He argued that meaning is created in the process of the production of the sign itself. This characteristic means that language is culturally constructed.

Nomenclaturism also assumed an invariant meaning for words. Saussure critiqued this view on the grounds that the same word can designate different things. This is true synchronically as well as diachronically. By ignoring the effect of time, nomenclaturism failed to appreciate that not only can the words used to express a thing or idea change over time, but so too can the ideas they express change over time. If nomenclaturism were correct and words were merely labels for independently existing things, then only words should change. This property demonstrates that language is a historical process.

The language system

Saussure argues that language has a special character — it has a contemporary social existence and it is the product of a historical trajectory. For every society, language is always an inheritance from the past. “No society, in fact, knows or has ever known language other than as a product inherited from preceding generations, and to be accepted as such” (Saussure 1966:71). Each linguistic state is thus the product of historical factors and these factors tend to exert a conservative force and insulate the linguistic sign from arbitrary change.

Saussure examines language in terms of a hierarchy of binary oppositions. These included internal and external elements of language, langue and parole, synchronic and diachronic aspects (Figure 2.2). External linguistics consists of all those relations that stand outside the language system. It includes such things
as how language articulates with the history of different peoples or cultures. It addresses the connections between language and political history as in colonialism when a dominant group imposes its language upon a subordinant one. It includes relationships with social institutions such as the church, schools etc. Internal linguistics refers to the language system complete with its own rules and principles of grammar. As Saussure (1966:23) puts it, “everything that changes the system in any way is internal.”

Within internal linguistics, Saussure distinguishes langue and parole. Langue refers to linguistic structure. It is language minus speech and consists of the set of linguistic habits that allow a speaker to communicate. It is the domain of articulation which accounts for the division of speech into syllables, or to the division of signs into meaningful units. Parole refers to speech understood as the social realization of language by a member of the linguistic community. It is an individual act and thus subject to considerable variability in expression. Saussure adopts this distinction to identify the social from the individual and the essential from the accidental. However, Saussure also noted that langue and parole exist in such a close relationship that it is difficult to separate them.

Within langue, Saussure identifies synchronic and diachronic components. The synchronic component consists of the fundamental principle of any idiosyncratic language (Saussure 1966:99–100). This refers to the system as it exists at a particular moment in time, a linguistic state. Synchronic analysis thus focuses on the logical and psychological relationships between coexisting elements within the same system as perceived by a language user. It encompasses the study of the sign as well as general grammar and is the domain of general linguistics. The diachronic component is the relationship that holds between successive terms substituted for one another over time (Saussure 1966:140). It describes a phase of linguistic evolution. Significantly, these elements do not, in and of themselves, form a system. These changes are typically not perceived by a language user. Diachronic analysis requires two methods of analysis – a prospective study that follows the course of

Figure 2.2  Saussure’s dichotomies of linguistic analysis.
time and a retrospective analysis that goes in the opposite direction. It is thus the domain of historical linguistics. For Saussure (1966:90), synchronic analysis takes precedence over the diachronic since it is the only reality for the community of language users.

The sign and its principles

The sign is the fundamental unit of linguistic analysis. Saussure defines the sign as a “two-sided psychological entity” linking a concept and a sound pattern (Saussure 1966:66). The concept is not a thing in the world, but rather a mental image of that thing. Similarly, the sound pattern is not a physical sound, rather it is the hearer’s cognitive interpretation of a sound. The concept and sound pattern are thus both mental entities and independent of any external object. Saussure defined the concept as the signified (signifié) and the sound pattern as the signifier (significant).  

Saussure illustrates the sign relation by means of a simple diagram (Figure 2.3). It shows an ellipse divided in half with the concept (signified) on the top and the sound pattern (signifier) on the bottom. The ellipse is flanked on either side by directional arrows pointing in opposite directions. The arrows emphasize that the two elements of the sign relation are mutually determined and symmetrical. That is, from one, it is possible to predict the other. This view of the sign relation differs from the popular notion in which the sign is taken to refer to the sound pattern alone.

Saussure then identifies two basic principles of the sign. The first of these is that the relation between signified and signifier is arbitrary. He writes,

The idea of ‘sister’ is not linked by any inner relationship to the succession of sounds s-ö-r which serves as its signifier in French; that it could be represented equally by just any other sequence is proved by differences among languages and by the very existence of different languages: the signified ‘ox’ has as its signifier b-ö-f on one side of the border (between France and Germany), but o-k-s (Ochs) on the other (Saussure 1966:67–68).
For Saussure, the term arbitrary does not mean that a signifier is subject to the free will of the speaker since the individual cannot easily alter the sign after it is adopted by a linguistic community. The term simply means that it is “unmotivated, i.e. arbitrary in that it actually has no natural connection with the signified” (Saussure 1966:69). It thus has a meaning closer to the word, “convention.”

Saussure proceeds to discuss two possible exceptions to this principle. The first exception is the case of onomatopoeia. This refers to words – *ouaoua* (French) or *wauwau* (German) – that sound like what they mean, in this case the barking of a dog. He dismisses onomatopoeia on three grounds – first, it is never an organic element of a linguistic system; second, it is far less common than popularly believed; and third, when it is introduced into a language, it undergoes essentially the same phonetic and morphological evolution as other words.

The second seeming exception is the case of exclamations. These are words popularly thought to be spontaneous expressions. He gives as an example *aie!* (French) which corresponds to *au!* (German). Here, there is no necessary correlation between the signal and its signification. Similarly, he suggests exclamations such as *diabe!* (devil) and *mordieu!* (God’s death) were originally meaningful words. These exclamations thus do not undermine the arbitrariness principle.

After establishing this general principle, Saussure notes that it is possible, and indeed necessary, to distinguish signs that are “intrinsically arbitrary” from those that are only “relatively arbitrary.” He writes,

> The fundamental principle of arbitrariness of the sign does not prevent our singling out in each language what is radically arbitrary, i.e., unmotivated, and what is only relatively arbitrary. Some signs are absolutely arbitrary; in others we note, not its complete absence, but the presence of degrees of arbitrariness: *the sign may be relatively motivated* (Saussure 1966:131, his emphasis).

As an example, he contrasts the numbers *vingt* and *dix-neuf*. The former is unmotivated whereas the latter is motivated since it contains the terms that constitute it. Because there is no language in which nothing is motivated, the study of language thus depends upon defining the limits of arbitrariness. These limits can be thought of in terms of the contrast between lexicological and grammatical languages. Saussure writes,

> The two extremes are like two poles between which the whole system moves, two opposing currents which share the movement of language: the tendency to use the lexicological instrument (the unmotivated sign) and the preference given to the grammatical instrument (structural rules) (Saussure 1966:133–134).
The second property is the linear character of the signifier. The signifier has a temporal aspect and this aspect is measured in a single linear dimension. Saussure explains that unlike visual signals, such as a ship’s flag, that may exploit more than one dimension simultaneously, auditory signals are capable of expressing only a single dimension. The elements of an auditory signal are presented one after another in a chain-like fashion. This feature can be seen in the representation of the auditory signal in writing where a sequence of graphic signs is substituted for a succession of sounds in time. He regards this principle to be as important as the arbitrariness principle since the whole mechanism of linguistic structure depends upon it.

Value and meaning

Saussure defines language as a signification system composed of discrete elements where the value of any one sign depends on the simultaneous coexistence of all others (Figure 2.4). This definition immediately raises the question of the relation of value to meaning. For him, they are not synonymous terms; rather, value is a component of meaning. He explains that values are always composed “of a dissimilar thing that can be exchanged for the thing of which the value is to be determined, and of similar things that can be compared with the thing of which the value is to be determined” (Saussure 1966:115, his emphasis).

Both similarities and dissimilarities are necessary for the existence of a value. For example, a word can be substituted for an idea. This is conventionally regarded as its meaning. But a word can also be compared to another word. He gives an example contrasting the French and English words for sheep:

Modern French *mouton* can have the same signification as English *sheep* but not the same value, and this is for several reasons, particularly because in speaking of a piece of meat ready to be served on the table, English uses *mutton* and not *sheep*. The difference in value between *sheep* and *mouton* is due to the fact that sheep has beside it a second term while the French word does not (Saussure 1966:115).

The value of a word is determined not only by its meaning, but also by its contrast with other words as elements within a system.
The language system can thus be understood as a sequence of linked signs. He writes, “(w)hether we take the signified or the signifier, language has neither ideas nor sounds that existed before the linguistic system, but only conceptual and phonetic differences that have issued from the system” (Saussure 1966:120). He also suggests sign context is more important than the idea or sound since the value of the sign may change without affecting its meaning or sound because a neighboring sign has changed. There is, therefore, nothing that exists outside the semiological system, no preexisting ideas. This claim is a clear refutation of both Platonic essences and Kantian idealism.

He then identifies syntagmatic and associative relations that give rise to separate orders of values (Saussure 1966:122). He clarifies this distinction by making an analogy to an architectural column. He says that a column is related to the architrave it supports by being spatially copresent. This can be seen as a syntagmatic relation. A column also may have a style such that if it is Doric it will evoke a mental comparison with other orders such as Ionic, Corinthian, and others, which are not spatially copresent. This is an associative (or paradigmatic) relation. The syntagmatic and associative relations thus function to limit arbitrariness and supply motivation (Saussure 1966:132).

Words enter into relations because of the linear character of languages. Syntagmas thus refer to combinations of words based upon sequentiality. He gives, as examples, re-lire (re-read), contra tous (against all), la vie humaine (human life), Dieu est bon (God is good), s’il fait beau temps, nous sortirons (if it’s fine, we’ll go out). In these examples, meaning is derived from what precedes a word, what follows it, or both as in a normal sentence. But words also derive meaning from their associations with other unspoken words that reside in memory. Associative relations hold between terms that constitute mnemonic groups. He gives as an example the word enseignement (teaching). This word will automatically bring to mind a host of other words including, enseigner (teach), reseigner (acquaint), armement (armament), changement (change), or éducation (education), and apprentissage (apprenticeship) (Figure 2.5). Some of these examples share a common root such as enseign-, or they may share a common suffix such as -ment. Others may be linked in terms of similar significations. Still others may be linked on the basis of similarity in sound patterns. In some cases, there may be a double associative link based on form and meaning.

Saussure and Modern Linguistics

All contemporary linguists acknowledge that Saussure’s contributions, while extremely valuable, constitute an incomplete characterization of language.
Consequently, numerous linguists have reworked and extended his approach with the goal of developing a systematic model. Of special significance are the contributions of Russian Formalism, the Prague Linguistic Circle, the Linguistic Circle of Copenhagen, and American Structural Linguistics.

Russian Formalism

Russian Formalism is the name of an eclectic movement of linguistics and literary criticism based in Russia during the first quarter of the twentieth century (Hawkes 2003). It consisted of two distinct scholarly groups, both of which were based outside the academy. One of these was the Moscow Linguistic Circle founded by Roman Jakobson in 1915. It included Grigori Vinokur and Petr Bogatyrev. The second group was the Petersburg Society for the Study of Poetic Language (OPOiA)Z) founded in 1916. It included among its members Victor Shklovski, Iuri Tynianov, Boris Eikhenbaum, Boris Tomashevski, and Victor Vinogradov. Shklovski is best known for his work on literary theory, while Eikhenbaum and Tynianov are known as literary historians. Tomashevski and Jakobson applied statistical analysis to verse in order to isolate metrical laws.

Although the proponents of the Russian Formalism did not agree on the nature of formalism, they were united in their rejection of positivism and their desire to transcend the psychologism and biographical focus of much nineteenth-century Russian literature. The standard approach to the study of literature during this period was to consider the text as a simple reflection of the author and his historical context. The formalists, by contrast, emphasized the autonomous and
self-referential nature of literature. Many were particularly interested in identifying a set of properties specific to language in both poetry and prose that could be identified as examples of “artfulness.” A good example of this approach is Eikhenbaum’s essay “How Gogol’s ‘Overcoat’ Is Made” (1982[1919]), which examined the text in terms of narrative devices and acoustic wordplay without considering any sociocultural factors. This approach corresponds closely with Saussure’s synchronic analysis. By the 1930s, the formalists, particularly Tynianov and Jakobson, began to emphasize the importance of diachronic analysis in the study of literature.

Russian Formalism had a strong influence on Valentin Voloshinov and Mikhail Bakhtin. In the late 1920s, Voloshinov (1973) sought to combine Marxism and linguistics. He criticizes Saussure’s synchronic approach and his emphasis on internal relations because of his belief that language is the defining human characteristic. For him, the sign “is part of organized social intercourse and cannot exist, as such, outside it, reverting to a mere physical artifact” (Voloshinov 1973:21). Voloshinov held that the study of verbal interaction was key to understanding social psychology. Words are dynamic social signs, which take different meanings for different social classes in different historical contexts. The meaning of a sign is not in its relationship to other signs within the language system, but rather in the social context of its use. For Voloshinov (1973:23), the sign is “an arena of the class struggle.”

Bakhtin’s debt to Russian Formalism can be seen in his early publications on the relations of ethics and aesthetics in literature. In Toward a Philosophy of the Act, Bakhtin (1993) rejected the “theoreticism” of ethics, defined as the focus on universal concepts, propositions, and laws, in favor of a description of the world that situates each act within its unique context (Morson and Emerson 1990:22–28). Similarly, he rejected the abstract focus of structural linguistics on rules and grammars in favor of a contextual understanding of the word (Morson and Emerson 1990:123–130). Bakhtin (1981) thus advocated the study of language as extralinguistic utterances situated within the context of their dialogic interrelations with other utterances. In this way, he reversed Saussure’s privileging of langue over parole. Bakhtin thus considered language as a material practice constituted by and through subjects. As he puts it, “life by its very nature is dialogic” (Bakhtin 1984:293).

Prague Linguistic Circle

The Prague Linguistic Circle was founded in 1926 by Vilém Mathesius, director of the English seminar at Charles University, and his colleagues Roman Jakobson, Bohuslav Havránek, Bohumil Trnka, and Jan Rypka (Vachek 1966). The Prague Circle counted among its members such prominent scholars as Jan Mukarovsky, Nikolai Trubetzkoy, Sergei Karcevski, Petr Bogatyrjev, and Dmitri
Cyzevsky. Former members of the Russian Formalist group represented a substantial contingent. In the 1930s younger scholars joined, especially René Wellek, Felix Vodicka, Jirí Veltrusky, Jaroslav Prusek, and Josef Vachek. Many notable international scholars including Edmund Husserl, Rudolf Carnap, and Émile Benveniste presented papers to the Circle.

The Prague School was a major force in twentieth-century linguistics (Waugh and Monville-Burston 1990). It adopted both functional and structural notions of language in order to discover universal laws. There was a focus on understanding the elements of language from the perspective of the communicative functions they perform. There was also a special interest in developing a structural theory of phonology, the function of sound in language. This led to the refinement of Saussure’s view of the phonological system by emphasizing its organization in terms of a small number of mutually orthogonal dimensions, such as voicing, stop versus continuant, and nasality, each of which functions as the basis of multiple contrasts.

Two of the most prominent members of the Prague Circle were Nikolai Trubetzkoy and Roman Jakobson. Trubetzkoy is best known for establishing phonology as a discipline separate from phonetics. His major work, Grundzüge der Phonologie (Principles of Phonology) (Trubetzkoy 1969), was published posthumously in 1939. According to Trubetzkoy (1969:4), Saussure ignored “the distinction between the study of sound pertaining to parole and the study of sound pertaining to langue.” Saussure was primarily concerned with how phonemes are combined in spoken sequence, but this elides the distinction between phonetics and phonology. For Trubetzkoy, the phoneme is a distinctive opposition in sound which distinguishes the lexical meaning of two words. This is thus appropriately considered from the perspective of phonology.

Roman Jakobson was also active in establishing phonology as a field of scientific study (Waugh and Monville-Burston 1990). His early work was conducted in association with Trubetzkoy and defined phonological systems and relations. He then became interested in distinctive features and child language. This is the period when Jakobson conducted his famous research on aphasia and discovered that the two components of aphasia, similarity disorder and contiguity disorder, are closely related to metaphor and metonymy (Jakobson 1968, 1971). In his later work, he turned toward popular culture and topics such as music, art, film, theater, as well as broader semiotic issues. During this period, he identified three types of sign systems: language substitutes such as writing and whistled languages, language transforms such as formalized scientific languages, and ideomorphic systems such as gestures or music (Jakobson 1973).

Jakobson was critical of several aspects of Saussure’s structural linguistics. For example, he rejected the oppositions between langue and parole, code versus
message, and competence versus performance and attempted to overcome them by means of dynamic structuralism. He also rejected the principle of arbitrariness apparently due to his reading of Peirce after his move to the United States and critiqued the principle of linearity due to his phonological work with the Prague School (Harris 2001:96). However, several of his most significant contributions, such as distinctive feature analysis, the theory of markedness, grew directly out of Saussure’s insights. According to Jacobson, his entire career was thus an attempt “to overcome mere shortsighted empiricism on the one hand and abstract speculative dogmatism on the other (Jakobson et al. 1984:8).

Copenhagen Linguistic Circle

The Copenhagen Linguistic Circle was founded by Louis Hjelmslev in 1931 (Fischer-Jørgensen 1967). It was directly inspired by the Prague Circle and included as founding members Kaj Barr, Viggo Brøndal, Poul Høybye, Hedvig Olsen, and Harry Pihler. Later additions included L. L. Hammerich, Eli Fischer-Jørgensen, Paul Diderichsen, Knud Togeby, and Henning Spang-Hanssen. The Copenhagen Circle established the international journal *Acta Linguistica* to develop structuralism as a new kind of linguistic research.

Hjelmslev is best known for an approach known as “glossmatics.” In his *Prolegomena to a Theory of Language* (Hjelmslev 1961), he describes his approach as the study of the immanent factors of semiotic systems holding the pragmatic dimension aside. His object of analysis is not only natural language, but also “any structure that is analogous to a language and satisfies the given definition” (Hjelmslev 1961:107). He thus sought to create a common semiotic language appropriate for the study of art, literature, history, logistics, and mathematics. His theory of connotation has been particularly influential in literature and aesthetics. Although Hjelmslev has been criticized as being overly abstract and terminological (e.g., Haas 1956:110), he is widely appreciated for pursuing Saussure’s goal of creating a general framework for semiotic theory (Eco 1977:41).

Hjelmslev’s stratified model of the sign is a rather complex elaboration of the Saussurian dyadic model (Figure 2.6). He begins with the standard signifier and signified distinction and establishes three strata. The first of these is what he calls the sign, the relationship between the expression plane and the content plane. More specifically, it refers to the relationship between content-form (A) and expression-form (B). The second stratum is the relationship between the sign and semiotically formed substances. The content-form and expression-form are thus respectively structured by content-substance (A′) and expression-substance (B′). Finally, the third stratum is the relation between semiotically amorphous matter (A″) and semiotically formed substance (B″).
For Hjelmslev, the study of the sign required the study of a formal system of relations. He writes, “the real units of language are not sounds, or written characters, or meanings; the real units of language are the relata which these sounds, characters and meanings represent” (Hjelmslev 1961:27). In many ways, his theory of connotation can be seen as an attempt to address the limitations of a theory of semiotics based solely upon denotation. He regards connotators as semiotic units of style in language (Hjelmslev 1961:115–116). These include such things as medium, tone, vernacular, national language, regional language, and physiognomy. He writes, “it seems appropriate to view the connotators as content for which the denotative semiotics are expression and to designate this content and this expression as a semiotic, namely a connotative semiotic” (Hjelmslev 1961:119, his emphasis).

American Structural Linguistics

American Structural Linguistics is closely associated with Leonard Bloomfield and his followers. Indeed, the period from 1933 to 1950 is sometimes called the “Bloomfieldian era” of linguistics (Hall 1990). Other influential advocates include Kenneth Pike, Edward Sapir, Benjamin Lee Whorf, George Trager, and Morris Swadesh. Many of these individuals were linguistic anthropologists who worked with Native American languages. Others, such as Zellig Harris (1951), extended Bloomfieldian ideas to develop procedures for the discovery of phonemes and morphemes based on their distributional properties.

Like Saussure, Bloomfield studied with the neogrammarians in Leipzig and Göttingen during 1913–14 and was particularly influenced by their methodology for studying patterns of sound change. In 1923, he reviewed the second edition of Saussure’s Cours (Bloomfield 1923). He then adopted Saussure’s concept of
language structure in his book *Language* (Bloomfield 1933). Like Saussure, Bloomfield emphasized the need to be objective, to deal only with physically observable phenomena, and to develop a precise terminology in order to make linguistics a true science.

Bloomfield was particularly interested in the semantic component of language. He developed a hierarchical approach to account for how meanings are attached to phonetic forms. According to this approach, the semantic can be divided into two parts, the lexicon and the grammar, where the lexicon is the total number of morphemes in a language and the grammar is the meaningful arrangements of form (Bloomfield 1933:162-3). He analyzed semantics using the same methodology developed in phonology, proposing a semi-analogous relationship between the two. With respect to lexical forms, he defined the smallest meaningful units as morphemes and their meanings as sememes (Bloomfield 1933:166). Similarly, the smallest meaningful units of grammatical form are tagmemes and their meanings are episememes. Bloomfield (1933:162) held that linguistic forms were analyzable in terms of morphemes and phonemes, but sememes were not because they were arbitrarily assigned to features in the real world. Cognitive anthropologists (e.g., Goodenough 1956) later challenged this view and Chomsky (1963) incorporated subsememic units in his transformational grammar. Although Bloomfield’s entire approach was not widely accepted, his emphasis on a precise science of linguistics dealing with observable phenomena was extremely influential.

**Structural Anthropology**

Ironically, Saussure’s best known advocate was not a linguist, but rather the French anthropologist Claude Lévi-Strauss. For Lévi-Strauss, structural linguistics marked a revolutionary shift in the study of language and offered the potential of a common scientific method for the semiological sciences. He predicted that structural linguistics would “play the same renovating role with respect to the social sciences that nuclear physics, for example, has played for the physical sciences” (Lévi-Strauss 1963:33). For this reason, he proposed that anthropology reorient itself on the linguistics model. He writes,

as a ‘semeiological’ science, anthropology turns towards linguistics – first because only linguistic knowledge provides the key to a system of logical categories and of moral values different from the observer’s own; second, because linguistics, more than any other science, can teach him how to pass from the consideration of elements in themselves devoid of meaning to consideration of a semantic system and show him how the latter can be built on the basis of the former. This, perhaps, is primarily the problem of language, but beyond and through it, the problem of culture in general (Lévi-Strauss 1963:368).
For Lévi-Strauss, linguistics became a science with the “phonological revolution.” He thus sought to identify the constitutive elements of kinship relations, marriage rules, totemic systems, myths, and cooking practices, that are homologous with phonemes and to identify their contrastive relationships within the larger system. He writes “like phonemes, kinship terms are elements of meaning; like phonemes, they acquire meaning only if they are integrated into systems” (Lévi-Strauss 1963:34). Similarly, he writes “like language . . . the cuisine of a society may be analyzed into constituent elements we might call ‘gustemes’, and which may be organized according to certain structures of opposition and correlation” (Lévi-Strauss 1963:86). For Lévi-Strauss, these different systems are homologous because different communication systems in the same societies are the product of the same unconscious structures (Lévi-Strauss 1963:62).

Lévi-Strauss was strongly influenced by Roman Jakobson with whom he taught at the Free School of Advanced Studies in New York City. It was Jakobson who introduced him to the work of Trubetzkoy of the Prague Circle. It is not surprising then that Lévi-Strauss adopted some of the same critiques of Saussure that Jakobson articulated (Lévi-Strauss 1976:17). One of these is the problem of synchronic and diachronic order. He notes that, for Saussure, the two categories exist in an absolute opposition with the synchronic associated with the conscious and the diachronic associated with the unconscious. He then cites the work of Trubetzkoy and Jakobson to demonstrate that the synchronic can be as unconscious as the diachronic. Another critique focuses on Saussure’s association of the phonetic, the diachronic and the individual with parole and the grammatical, the synchronic and the collective with langue. He cites Marx to say that the diachronic can occur within the collective, and Freud to argue that the grammatical can be achieved within the individual. Yet another of Lévi-Strauss’s critiques addresses Saussure’s neglect of history. He argues that the history of sign systems “includes logical evolutions related to different levels of structuration which must first be isolated” (Lévi-Strauss 1976:17). Citing Émile Durkheim, he suggests that the difference between structure and function is one of degree and not kind since structure is always in the process of forming and breaking down. For this reason, he advocates a transformational method.

Lévi-Strauss (1966) applied his semiotic approach to the study of human cognition. He identifies two distinct modes of thought, mythic thought and scientific thought. Mythic thought is associated with building up structures by fitting together events, an intellectual form of bricolage. Related to perception and imagination, it was established some ten thousand years ago and is still central to contemporary western thought. Scientific thought is separate from experience and perception. Its results take the form of events which constitute the basis for hypotheses. Lévi-Strauss is quick to note that these modes do not correspond to
different stages of evolution, rather they are two strategic levels of articulation with nature, since examples of both can be found in all societies.

Lévi-Strauss’s structural anthropology has been sharply critiqued within the profession. David Maybury-Lewis (1969:x), for example, asserts, “unfortunately, a great deal of what Lévi-Strauss writes cannot be taken seriously.” Similarly, Dan Sperber has argued that Lévi-Strauss has shown the opposite of what he claims since myths do not constitute a language.

All these learned terms – signifier and signified, paradigm and syntagm, code, mytheme, will not for long hide the following paradox: that if Lévi-Strauss thought of myths as a semiological system, the myths thought themselves in him, and without his knowledge, as a cognitive system (Sperber 1975:84).

And Stanley Diamond (1975:297) has written, “for structuralism, epitomized in Lévi-Strauss, is the intellectual ideology, and the immanent logic, of a new, technocratic totalitarianism.” These critiques seem unduly harsh and indeed largely mischaracterize his contributions. It is hard to fault Lévi-Strauss for his ambitious attempt to create a science of cultural forms based upon language even if he was ultimately unsuccessful in creating that science.

Symbolic and Cognitive Anthropologies

Structural linguistics has also had a significant influence on two other anthropological approaches, symbolic and cognitive anthropology. Symbolic anthropology, also called interpretive anthropology and comparative symbology, is the study of culture as a system of meaning expressed through symbolic media.17 The concern is not so much with whether a particular culture’s beliefs are accurate depictions of reality from a Western scientific point of view, but rather how what is thought to be real is treated as real (Dolgin et al. 1977:5). It emerged in the 1960s largely due to the work of Clifford Geertz, David Schneider, and Victor Turner. Symbolic anthropology can be understood as reaction against the sterile scientism of both ecological functionalism and structural anthropology. It has been particularly influenced by developments in psychology, psychoanalysis, and linguistics.

Geertz sought to establish a natural empirical science of culture conceived as symbolic behavior. Inspired by Talcott Parsons and Max Weber, Geertz (1973:250) identified culture as a system of symbols by which humans confer significance upon their experience. Symbol systems afford humans with a meaningful framework for ordering their selves, their relations with others, and their relations with the world around them. They are, therefore, both the product and the determinant of social
The concept of culture I espouse … is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretative one in search of meaning. It is explication I am after, construing social expressions on their surface enigmatical (Geertz 1973:5).

Geertz was sharply critical of the seemingly interminable theoretical debates in anthropology over subjectivism and objectivism and their variants such as materialism and idealism, mentalism and behavioralism, interpretivism and positivism. He writes,

Once human behavior is seen as symbolic action – action which, like phonation in speech, pigment in painting, line in writing or sonance in music, signifies – the question as to whether culture is patterned conduct or a frame of mind or even the two somehow mixed together loses sense (Geertz 1973:10).

He argues that the question to ask about a symbolic act is not its ontological status, but rather its import, namely what is getting said by means of its agency. Geertz’s approach to culture is perhaps best exemplified in his famous essay “Deep Play: Notes on the Balinese Cockfight” (Geertz 1972) where he treats the Balinese cockfight as a text to highlight its use of emotion for cognitive ends.

While Geertz focused on culture as systems of meaning, Victor Turner focused on the pragmatics of symbols, that is, how symbols operate as active forces in social processes. For him, studying symbols required “studying symbols in social action, in practice” (Turner 1985:216). As a student of Max Gluckman and the Manchester school, he was particularly attuned to the ways in which societies cope with conflict and disharmony. Turner saw symbolic action as part of the dialectic by which societies maintained social solidarity. Turner (1967:31–32) drew a distinction between dominant and instrumental symbols. Dominant symbols occur in many different contexts, but their meaning possesses a high degree of stability throughout the total symbolic system. Instrumental symbols are the means of achieving specific goals and are accordingly more variable.

Turner is perhaps best known for his study of ritual in Ndembu society. In his early work (e.g., Turner 1957), he focused on identifying the main principles underlying Ndembu social structure. He treated ritual as the social glue that binds society together. He stated in a footnote, “I do not intend here to make a cultural analysis of Ndembu ritual but simply to isolate from the ritual complex those sociological features which are relevant” (1957:289n). In his later work, he came to
appreciate ritual as social drama which not only represents society, but constitutes it (Turner 1967, 1985). It is in this context that he developed his famous theories of liminality and communitas which he termed “anti-structure.” Liminality refers to three phases of the ritual process. The first is the communication of sacra, where secret symbols are exhibited to the ritual subjects in the form of sacred objects. The second is the ludic deconstruction and recombination of sacra. The third is the simplification of the social structure where the authority of the ritual instructors over the ritual subjects is the only relevant dimension. Communitas describes the sense of sameness or equality that develops among the ritual subjects during this third phase. Turner extends this idea to society which he interprets as emerging from the dialectic process between communitas, the undifferentiated community of individuals, and structure, the differentiated and sometimes hierarchical system of social positions.

Like Geertz, David Schneider (1968) regarded culture as a system of symbols and their meanings. He terms this system a “galaxy.” This concept does not specify the kinds of relationships between the systems and meanings, but only that they form a larger unit of some kind. He then suggests that “each galaxy has its epitomizing symbol; this epitomizing symbol is only one form of the possibly very few epitomizing symbols that characterize the whole culture” (Schneider 1976:215). He gives, as examples, the idea of hierarchy in India and equality in America. He cites with approval Lévi-Strauss’s and Turner’s studies of the relations of symbols and meanings in terms of dualisms which identify such characters as dominant and subordinant, marked and unmarked, stressed and unstressed. For him, culture change takes place not by the rapid replacement of one system by another, but rather by gradual shifts and transformations.

Schneider developed many of his insights in the context of his long-term analyses of kinship. In his book American Kinship: A Cultural Account (Schneider 1968), he provided a critique of the standard interpretations of American kinship produced by componential analysis. This method is a qualitative approach that analyzes a set of concepts with respect to the features they share. It emerged out of ethnomemtics and can be traced back to Peirce. In his later work, he came to question the phenomenological reality of kinship as a valid comparative category much as Lévi-Strauss had critiqued the notion of the primitive mind (Schneider 1984).

Cognitive anthropology is the study of the cognitive aspects of culture, particularly through models of language use (Tyler 1969). It takes as its domain of research cultural knowledge “embedded in words, stories, and in artifacts, and which is learned from and shared with other humans” (D’Andrade 1995:xiv). Cognitive anthropology emerged in the late 1960s and has close ties to the other cognitive sciences such as psychological anthropology, linguistics, cognitive linguistics, psycholinguistics, and cognitive psychology (see Chapter 7). There are
two main sources of inspiration. The first is the structuralism of Lévi-Strauss and the contributions of the Prague School of linguistics, especially Jakobson. The second is the development of information theory and computer languages by Claude Shannon and Norbert Weiner. However, most cognitive anthropologists are critical of symbolic or structuralist approaches which rely on the anthropologist’s intuitive abilities and which, they argue, cannot be verified. Instead they typically adopt formal methodologies and make use of computer modeling, expert systems, text analysis, symbolic logic, multi-dimensional scaling, and cluster analysis.

D’Andrade (1995:1) has identified four basic research areas in cognitive anthropology: semantics, knowledge structures, models and systems, and discourse analysis. Early research focused on the semantic studies of native systems of classification. These studies provided the foundation for ethnoscience, also called the new ethnography. D’Andrade (1995:245–248) suggests that cognitive anthropology gradually moved away from its linguistic foundation to take up more psychological approaches. This shift began in the late 1970s with decision models and narrative grammars, and became more pronounced in 1980s with interests in artificial intelligence and cognitive networks. The goal was to “put together schematic cluster of features into complex objects without any necessary linguistic base” (D’Andrade 1995:246–47). Current research focuses on cognitive theories of emotions, interests in health and well-being, religious symbolism, and computer-aided discourse analysis (Colby 1996:209).

Summary

Saussure’s revolutionary insight was to conceptualize language as a system of relationships between elements defined only by their differences. In taking this perspective, he singlehandedly placed the study of language on a sound scientific footing. This was a radical breakthrough for linguistics which had previously emphasized compiling inventories of languages and charting their historical development. Saussure has also had a major influence on semiotics. According to Paul Bouissac (2004:242), his semiotic legacy is one of “meeting his epistemological challenge through applying his linguistic approach to other cultural institutions and productions.” It is the case, however, that because of the nature of his writings, Saussure’s full vision remains incompletely documented and only partially understood.

Saussure’s influence on structural linguistics and literature took four main routes: Russian Formalism, the Prague Linguistic Circle, the Copenhagen Linguistic Circle, and American Structural Linguistics. The Russian Formalists, like Shklovskii, adopted Saussure’s notion of language in their studies of the
particular “effects” of literature produced by the literary devices. Voloshinov and Bakhtin critiqued Saussure’s internal approach and emphasized the social and political context of sign usage. The Prague Circle further developed Saussure’s work on phonology. And while Jakobson was critical of Saussure’s ideas of arbitrariness and linearity, he accepted his ideas of binary oppositions in his theories of markedness. The Copenhagen School was perhaps the strongest exponent of structural linguistics. Hjelmslev extended Saussure’s work to create a general framework for semiotic theory. In America, Leonard Bloomfield took up Saussure’s approach to ground linguistics more firmly in science.

Saussure has also had a considerable influence on cultural anthropology, particularly in its structural, symbolic, and cognitive versions. Simulated by Jakobson, Lévi-Strauss recast anthropology in the semiotic mold as a means of bringing it in line with the other nomothetic sciences. His structural anthropology had broad impact on the field and beyond. Symbolic anthropologists, such as Geertz, Turner, and Schneider, all sought to contribute to a science of culture based on symbolic behavior. Geertz and Schneider tended to emphasize systems of meaning, while Turner highlighted the pragmatics of symbolic action. Finally, cognitive anthropologists have been inspired by the Prague School and information theory. They have generally emphasized the importance of formal methodologies in response to the subjective structural and symbolic approaches. The Saussurian approach, however, was not the only form of semiotics to engage anthropology. A second, historically unrelated form, associated with the writings of Charles Sanders Peirce, also began to attract a following, in part because it drew together key aspects of cultural and linguistic anthropology.
CHAPTER 3

The Peircian Alternative

... the entire universe – not merely the universe of existents, but all that wider universe, embracing the universe of existents as a part, the universe which we are all accustomed to refer to as “the truth” – that all this universe is perfused with signs, if not composed exclusively of signs.

Charles Sanders Peirce (5.448 n1)\textsuperscript{19}

Although little known to the general public, Charles Sanders Peirce is widely regarded as America’s greatest philosopher. Bertrand Russell wrote that he was “one of the most original minds of the later nineteenth century, and certainly the greatest American thinker ever” (Russell 1959:276). Karl Popper described Peirce as “one of the greatest philosophers of all times” (Popper 1972:212). Ernest Nagel held that Peirce was the most original philosophical mind that the United States has yet produced (Nagel 1982:303). Umberto Eco considered him “the greatest American philosopher of the turn of the century and beyond doubt one of the greatest thinkers of his time” (Eco 1989:x–xi). Hilary Putnam has called him “a towering giant among American philosophers” (Putnam 1990:252).

Peirce’s august reputation is largely due to his role as the founder of the distinctive American philosophy known as “pragmatism.” This is the theory that the meaning of an idea or action can be determined by considering what idea or action it routinely generates, that is to say, its practical consequences. He regarded this principle as basic to the logic of science. Pragmatism has been quite influential in American philosophy. It was adopted and modified in different ways by William James, John Dewey, Josiah Royce, and George Herbert Mead. More recently, it has been important in the writings of such contemporary philosophers
as Willard V. O. Quine, Hilary Putnam, Richard Rorty, Susan Haack, Christopher Hookway, Jürgen Habermas, and Karl-Otto Apel.

In addition to his importance to modern philosophy, Peirce’s distinguished reputation is also due to his original and incisive contributions to modern semiotics. Peirce conceived of semiotics as an irreducible form of life, encompassing humans and nature, and indeed all that exists in the universe. This view of semiotics differs significantly from that of Saussure. Saussure, as we have seen, regarded semiotics as a signifying system of which linguistics was the most important component. In an often quoted passage, Peirce held that not only do humans engage in semiosis as they endlessly represent and interpret reality, they themselves are signs. “The fact that every thought is a sign, taken in conjunction with the fact that life is a train of thought, proves that man is a sign” (5.253). Peirce’s semiotic insights are now being investigated in fields as diverse as architecture, literature, education, engineering, mathematics, and philosophy.

Charles Sanders Peirce

Charles Sanders Peirce was born on September 10, 1839 in Cambridge, Massachusetts (Figure 3.1). His father, Benjamin Peirce (1809–1880), was a
prominent professor of mathematics and astronomy at Harvard College. He published several introductory mathematics textbooks (e.g., *Linear Associative Algebra*, 1870), and an advanced one in physics (*Analytic Mechanics*, 1855). Benjamin Peirce was extremely active in the movement to improve higher education in the sciences. He was president of the American Association for the Advancement of Science in 1853–54, and helped found the U.S. Coast and Geodetic Survey in 1836, Harvard University’s Lawrence Scientific School in 1847, and the National Academy of Science in 1863. Charles’s mother, Sarah Hunt Mills, was from a distinguished New England family. Her father was Elijah Hunt Mills, a lawyer and senator from Massachusetts.

Charles had four siblings, three brothers and one sister. His oldest brother, James Mills Peirce (1834–1906), left the ministry to become professor of mathematics and dean of the faculty at Harvard College. His younger brother, Benjamin Mills Peirce (1844–1870), became a mining engineer and compiled *A Report on the Resources of Iceland and Greenland*, published by the U.S. State Department in 1868. His youngest brother, Henry Davis Peirce (1849–1916), was a diplomat and served as secretary of legation at the U.S. Embassy in St. Petersburg, Third Assistant Secretary of State, and later minister to Norway. His sister, Helen Huntington Peirce (1845–1923), married William Rogers Ellis, who went into the rolling mill business and eventually real estate. The Peirce children enjoyed a remarkable intellectual climate. Poets, scientists, lawyers, and senators were frequent visitors at their family home and included such notable figures as Louis Agassiz, Rufus Choate, Ralph Waldo Emerson, Margaret Fuller, Oliver Wendell Holmes, Henry Wadsworth Longfellow, James Russell Lowell, Theodore Parker, Francis Parkman, and Daniel Webster.

Charles graduated from Harvard College in 1858, but remained afterwards at the college working occasionally as a tutor. In the latter half of 1860, he became a private student of Agassiz, who introduced him to taxonomy. One of his tasks was sorting fossil brachiopods. In the spring of 1861, Charles entered the Lawrence Scientific School, then one of the most progressive scientific schools in the country. That same year, he was appointed as an aide in the U.S. Coast Survey, an association that lasted more than 30 years. In 1862, he received a Master of Arts degree based upon residence. A year later, he graduated *summa cum laude* with Bachelor of Science degree in Chemistry.

In the same year, Charles married Harriet Melusina Fay. Zina, as she was called, was an early feminist working to improve the role of women in society. She advocated such causes as reducing the burden of housekeeping, creating institutions to give women a voice in public affairs, and championing women’s higher education. She published a series of essays on “Co-operative Housekeeping” in the *Atlantic Monthly* and was an organizer of the short-lived Cambridge Co-operative
Housekeeping Society. She was also active in the movement for a “Woman’s Parliament” and was elected president at its first convention in New York City in 1860. She was one of the organizers of the Woman’s Education Association of Boston, which later became Radcliffe College.

In 1865, Peirce gave a series of 12 lectures at Harvard on the logic of science. These covered a wide range of topics including the theories of Whewell, Mill, Comte, Boolean logic, Kant, forms of induction and hypothesis, grounds of induction and teleological logic. These were followed in 1866 by 12 lectures at the Lowell Institute. These lectures contained the basic elements of his views on philosophy and logic (both in the sense of formal logic and in the broader sense of logic as the general theory of signs). In 1867, he began working for the Harvard Observatory and was elected a resident fellow of the American Academy of Arts and Sciences. In 1870, he initiated a series of salons with leading Boston intellectuals including William James, Oliver Wendell Holmes, Chauncey Wright, Nicholas St. John Green, Henry Ware Putnam, Francis Greenwood Peabody, and William Pepperell. This informal group came to be known as the Metaphysical Club (Menand 2001). Peirce later claimed that these meetings gave birth to the method of pragmatism (cited in Brent 1998:83).

In 1872, Peirce was instructed by his father to direct pendulum experiments for the Coast Survey. He and a team of scientists began a series of observations of gravity on Hoosac Mountain and in the Hoosac Tunnel in northwestern Massachusetts as well as at Northampton and Cambridge. He also continued the photometric research he had begun at Cambridge. In 1875, on assignment with the Coast Survey, he made determinations at initial stations in Berlin, Geneva, Paris, and Kew. He also visited various libraries and observatories to gather information on the creation of star catalogues. Much of this information was published in his book Photometric Researches (Peirce 1878b). Peirce then returned to the United States to set up an initial station in Hoboken, New Jersey modeled upon the European facilities. This required him to move to New York City. Zina, who had her own commitments, chose to remain in Cambridge and the couple never again lived together. Despite his personal problems, Peirce’s scientific reputation flourished and he was elected to the National Academy of Sciences in 1877.

From 1879 to 1884, Peirce took a position as lecturer at Johns Hopkins University and was closely associated with the Mathematics Department. In 1883, he and his students edited a book on logic (Peirce 1883). During this period, Peirce suffered a number of misfortunes. The most severe of these was the death of his father in 1880, who had been one of his strongest supporters at the Coast Survey. A year later, when his father’s replacement Carlile Patterson died, Peirce’s status at the Coast Survey became tenuous. Meanwhile, during his separation from Zina, Peirce met and had an affair with Juliette Annette Froissy, possibly the widow of Count
Peirce apparently made little effort to hide this relationship and his circle of friends and the larger academic community were scandalized. Although he divorced Zina in 1883 and married Juliette immediately thereafter, the damage was done. In 1884, Johns Hopkins University abruptly dismissed him from his position.

In 1887, Charles and Juliette moved to Milford, Pennsylvania, where they purchased an estate they named Arisbe. There, Peirce had hoped to found an ideal intellectual community, but his plans failed miserably. He spent his time working to complete a major report on his 1880 gravity determinations. When he resigned his appointment with the Coast Survey in 1891 he was forced to depend almost exclusively upon the generosity of his friends for financial support. For example, his good friend William James arranged for him to give a series of lectures at the Cambridge Conference in 1898. After a series of misguided ventures, Peirce found himself impoverished as well as isolated from the academic community. He died of cancer at his home in Milford, Pennsylvania in 1914.

Peirce was a voluminous writer, but only a small part of what he wrote was ever published. His published works constitute approximately 12,000 printed pages and his known unpublished manuscripts consist of about 90,000 handwritten pages. In addition, the articles he did publish are hard to access because they are scattered among various magazines and journals including *The Monist*, *The Nation*, *Atlantic Monthly*, *Popular Science Monthly*, and *Cosmopolitan*. After Peirce’s death in 1914, Juliette sold his unpublished manuscripts to the Department of Philosophy at Harvard University. These papers were collected and edited by Charles Hartshorne and Paul Weiss in a six volume edition and by Arthur W. Burks in two volumes (Hartshorne, Weiss, and Burks 1931–58). These volumes are of limited use to the serious scholar because they are derived from sources written at different times. The Peirce Edition Project is currently rectifying this situation and has adopted a chronological approach to compiling his work. Six volumes of a projected 30 volume set are now published (Peirce Edition Project 1982, 1984, 1986, 1988, 1993, 2000). Selected texts from this series have been published in two volumes entitled *The Essential Peirce: Selected Philosophical Writings* (Houser and Kloesel 1992; Peirce Edition Project 1998). Other miscellaneous compilations include Carolyn Eisele’s (1976) edition of his mathematical studies, Charles Hardwick’s (1977) edition of his correspondence with Lady Victoria Welby, Kenneth Ketner and James Cook’s (1975–82) four volume edition of his contributions to *The Nation*, Ketner’s (1986) bibliography of Peirce’s publications, Eisele’s (1985) edition of his contributions to the philosophy of science, Ketner’s (1992) edition of Peirce’s 1898 Cambridge Conference Lectures, and Patricia Ann Turrisi’s (1997) edition of his 1903 Harvard lectures.
Perhaps Peirce’s most original contribution to science is the metaphysical theory he called *Synechism*. This is the view that the universe exists as a continuous whole and increases in complexity and connectedness through semiosis. De Waal (2001:56) notes that this view was anticipated in some ways by Gottfried Leibnitz who held that nature is continuous and does not make leaps. Peirce, however, uses the term synechism to refer not only to ontological questions of being, but also to questions about becoming. Signs not only exist in the world, they also grow and continually produce other signs. For Peirce, semiosis is an uniquely irreducible form of activity in nature. This implies that all of nature, including humans, is the proper subject of semiotic study. Deely (1996) has termed this insight, his “Grand Vision.”

In his essay “Immortality in the Light of Synechism,” Peirce provides a definition of synechism as follows,

> The word *synechism* is the English form of the Greek (synechismos), from (synechés), continuous. For two centuries we have been affixing -ist and -ism to words, in order to note sects which exalt the importance of those elements which the stem-words signify. Thus, *materialism* is the doctrine that matter is everything, *idealism* the doctrine that ideas are everything, *dualism* the philosophy which splits everything in two. In like manner, I have proposed to make *synechism* mean the tendency to regard everything as continuous … I carry the doctrine so far as to maintain that continuity governs the whole domain of experience in every element of it (Peirce Edition Project 1998:1, his emphasis).

The notion of continuity described here is derived from the concept of infinity developed by the mathematicians Georg Cantor and A. B. Kempe (Eisele 1976). Peirce writes that continuity is “the very idea the mathematicians and physicists had been chiefly engaged in following out for three centuries” (1.41). He described it as “the merging of part into part,” (1.164) where “all is fluid and every point directly partakes the being of every other” (5.402n2). This is a novel view and one that explicitly rejects the Cartesian mind/body duality. As Peirce puts it, synechism “will not admit a sharp sundering of phenomena and substrates. That which underlies a phenomenon and determines it thereby is, itself, in a measure, a phenomenon” (7.629). Peirce further explains that synechism is a synthesis of tychism and pragmatism (4.584). Tychism is the theory that absolute chance plays an active role in the universe and is a factor in evolution. Pragmatism, by contrast, is not a metaphysical concept, but rather a form of reasoning. It is a method for investigating the meaning of concepts by envisioning their practical consequences.
Synechism is thus simultaneously a statement of the constitutive force of chance and a procedure for investigating its effects.

The pragmatic maxim

Peirce first published the idea of pragmatism in an article entitled “How to Make our Ideas Clear” that appeared in Popular Science Monthly in 1878. Although the word pragmatism does not appear anywhere in the article, the theory is already well developed. He writes,

A clear idea is defined as one which is so apprehended that it will be recognized wherever it is met with, and so that no other will be mistaken for it. If it fails of this clearness, it is said to be obscure (Peirce 1878a:286).

The basic premise here is that an idea is only clear if it produces the effect of recognition. It is not enough, however, for this “recognition effect” to occur in an individual’s consciousness. It must be experienced by a community of believers. A clear idea then is something that is widely understood by the general populace.

For Peirce, pragmatism was a method of reasoning or a form of logic and not a philosophical system. He writes,

The word pragmatism was invented to express a certain maxim of logic, which, as was shown at its first enouncement, involves a whole system of philosophy. The maxim is intended to furnish a method for the analysis of concepts … The method prescribed in the maxim is to trace out in the imagination the conceivable practical consequences – that is, the consequences for deliberate, self-controlled conduct – of the affirmation or denial of the concept; and the assertion of the maxim is that herein lies the whole of the purport of the word, the entire concept (8.191).

All cognition then is a semiotic process that is mediated by signs. To understand the meaning of a concept one needs to examine its various contexts of use. However, this, by itself, is insufficient. Meaning can only properly be understood with reference to those logical concepts that establish a belief which in turn becomes a habit of thought. Peirce explains these relationships as follows:

About forty years ago, my studies of Berkeley, Kant, and others led me, after convincing myself that all thinking is performed in Signs, and that meditation takes the form of a dialogue, so that it is proper to speak of the “meaning” of a concept, to conclude that to acquire full mastery of that meaning it is requisite, in the first place, to learn to recognize the concept under every disguise, through extensive familiarity with instances of it. But this, after all, does not imply any true understanding of it; so that it is further requisite that we should make an abstract logical analysis of it into
its ultimate elements, or as complete an analysis as we can compass. But, even so, we may still be without any living comprehension of it; and the only way to complete our knowledge of its nature is to discover and recognize just what general habits of conduct a belief in the truth of the concept (of any conceivable subject, and under any conceivable circumstances) would reasonably develop; that is to say, what habits would ultimately result from a sufficient consideration of such truth (6.481).

Ironically, it was Peirce’s friend, William James, who popularized the term “pragmatism.” James introduced it in his California Union address “Philosophical Conceptions and Practical Results” in 1898 (James 1898) and later developed it in his book *Pragmatism: A New Name for Some Old Ways of Thinking* (James 1975[1907]). James explicitly attributes this idea to Peirce:

> The term [pragmatism] is derived from the same Greek word [pragma] meaning action, from which our words ‘practice’ and ‘practical’ come. It was introduced into philosophy by Mr. Charles Peirce in 1878 … Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought’s meaning, we need only determine what conduct it fitted to produce: that conduct is for us its sole significance … To attain perfect clearness in our thoughts of an object, then we need only consider what conceivable effects of a practical kind the object may involve – what sensations we are to expect from it, and what reactions we must prepare (James 1975:28–29).

James then departs from Peirce and uses the term as a theory of truth. He argues that the standard notion of truth holds that truth is a property of ideas that obtain by virtue of their correspondence to reality. The problem with this definition turns on what is meant by correspondence. James suggests that there is no such thing as “absolute truth” rather true beliefs are the ones that lead us to continue to believe in them as the evidence continues to be accumulated. James (1975[1907]:438) regarded absolute truth as “what no farther experience will ever alter.” It is thus an ideal point never reached. Particular beliefs come to be true in practice and continue to be true as they are maintained through practice.

Peirce took issue with James’ appropriation of his pragmatic maxim. For Peirce, the issue is the practical effects of the belief being true, while for James the focus is on the practical effects of the belief being believed to be true (De Waal 2005:21). This may seem to be a subtle distinction, but it is the difference between scientific realism and social constructivism. In his article “What Pragmatism Is,” Peirce (1905) proposed an alternative name, *pragmaticism*, to differentiate their two versions. He writes,

> In the April number of the *Monist* I proposed that the word ‘pragmatism’ should hereafter be used somewhat loosely to signify affiliation with Schiller, James, Dewey,
Royce, and the rest of us, while the particular doctrine which I invented the word to denote, which is your first kind of pragmatism, should be called “pragmaticism.” The extra syllable will indicate the narrower meaning … Pragmaticism is not a system of philosophy. It is only a method of thinking (8.205–6).

Doctrine of categories


Firstness is perhaps the hardest of the three categories to understand. It refers to the conception of being or existing independent of anything else. It is a potentiality or possibility that might be realized. He writes,

Firstness is the mode of being which consists in its subject’s being positively such as it is regardless of aught else. That can only be a possibility. For as long as things do not act upon one another there is no sense or meaning in saying that they have any being, unless it be that they are such in themselves that they may perhaps come into relation with others. The mode of being a redness, before anything in the universe was yet red, was nevertheless a positive qualitative possibility. And redness in itself, even if it be embodied, is something positive and sui generis. That I call Firstness. We naturally attribute Firstness to outward objects, that is we suppose they have capacities in themselves which may or may not be already actualized, which may or may not ever be actualized, although we can know nothing of such possibilities [except] so far as they are actualized (1.25).

Firstness can thus be defined as unanalyzed, instantaneous, raw feeling. Some examples include “the feeling of acute pain, an electric shock, a thrill of physical delight, the sensation of redness or blackness, the piercing sound of a train whistle, a penetrating odor, or any other impression which is forced upon the mind and compels its total attention” (Gorlee 1994:40–41).

Secondness is the conception of being relative to, or in reaction with, something else. It involves the dynamic of otherness. Peirce defines it as follows:

Let us begin with considering actuality, and try to make out just what it consists in. If I ask you what the actuality of an event consists in, you will tell me that it consists in its happening then and there. The specifications then and there involve all its relations to other existents. The actuality of the event seems to lie in its relations to...
the universe of existents. A court may issue injunctions and judgments against me and I not care a snap of my finger for them. I may think them idle vapor. But when I feel the sheriff’s hand on my shoulder, I shall begin to have a sense of actuality. Actuality is something brute. There is no reason in it. I instance putting your shoulder against a door and trying to force it open against an unseen, silent, and unknown resistance. We have a two-sided consciousness of effort and resistance, which seems to me to come tolerably near to a pure sense of actuality. On the whole, I think we have here a mode of being of one thing which consists in how a second object is. I call that Secondness (1.24).

Secondness is how we experience reality around us. It is implicated “whenever we make an effort, a decision, or a discovery; orient ourselves in time and space” (5.52–58). It is always based upon past experience. Thus, all knowledge of the world and human life are Seconds (Gorlee 1994:41).

Thirdness is the conception of mediation whereby a First and Second are brought into a relation with one another. It embodies continuity and general principles regarding the rule of feeling and action. Peirce writes,

Now for Thirdness. Five minutes of our waking life will hardly pass without our making some kind of prediction; and in the majority of cases these predictions are fulfilled in the event. Yet a prediction is essentially of a general nature, and cannot ever be completely fulfilled. To say that a prediction has a decided tendency to be fulfilled, is to say that the future events are in a measure really governed by a law. If a pair of dice turns up sixes five times running, that is a mere uniformity. The dice might happen fortuitously to turn up sixes a thousand times running. But that would not afford the slightest security for a prediction that they would turn up sixes the next time. If the prediction has a tendency to be fulfilled, it must be that future events have a tendency to conform to a general rule. “Oh,” but say the nominalists, “this general rule is nothing but a mere word or couple of words!” I reply, “Nobody ever dreamed of denying that what is general is of the nature of a general sign; but the question is whether future events will conform to it or not. If they will, your adjective ‘mere’ seems to be ill-placed.” A rule to which future events have a tendency to conform is ipso facto an important thing, an important element in the happening of those events. This mode of being which consists, mind my word if you please, the mode of being which consists in the fact that future facts of Secondness will take on a determinate general character, I call a Thirdness (1.26).

All intellectual thought is a Third since it creates order and regularity out of chaos and randomness. It is prospective and permits us to predict the future and to act accordingly (Gorlee 1994:41).

Peirce demonstrates the utility of these categories by applying them to different fields of research (Table 3.1). In logic, for example, hypothesis (or abduction) is a
First, deduction is a Second, and induction is a Third. In metaphysics, spirit is a First, matter is a Second, and evolution is a Third. In physics, rest is a First, velocity is a Second, and acceleration is a Third. In biology, variation is a First, heredity is a Second, and selection is a Third. In physiology, irritation is a First, reflex is a Second, and repetition is a Third. In psychology, feeling is a First, willing is a Second, and knowing is a Third. The implication here is that all fields, and indeed all knowledge, can be characterized by these three, and only these three, ontological categories.

The theory of signs

Peirce developed his theory of signs throughout his life. Although there were subtle changes, his basic notion of the sign remained remarkably consistent. For Peirce, the sign is “something which stands to somebody for something in some respect or capacity” (2.228). It is irreducibly triadic in nature and contains within it the ability to produce another sign in an endless process of semiosis. As Lee (1997:96) puts it, “the sign mediates the relationship between itself and an object in such a way as to cause another sign to relate to it in the same way it relates to the object and so on.” This is a significant expansion of the Stoic philosophers’ definition of the sign as aliquid stat pro aliquo, or “something that stands for something else” and goes well beyond Saussure’s dyadic signified–signifier model in accounting for things-in-the-world.

The sign relation

Peirce’s sign relation consists of three elements – the sign, the object, and the interpretant. Holding the sign aside for the moment, the object is defined as “that which so determines a sign that the latter determines an idea in a person’s mind” (8.343). The interpretant is defined as “that which the sign produces in the Quasi-mind that is the Interpreter by determining the latter to a feeling, to an exertion, or to a Sign, which determination is the Interpretant” (4.536). Elsewhere, he
writes that,

a sign endeavors to represent, in part at least, an Object, which is therefore in a sense the cause, or determinant, of the sign even if the sign represents its object falsely. But to say that it represents its Object implies that it affects a mind, and so affects it as, in some respect, to determine in that mind something that is mediately due to the Object. That determination of which the immediate cause, or determinant, is the Sign, and of which the mediate cause is the Object may be termed the Interpretant (6.347).

Applying the theory of categories, the sign thus stands in a triadic relation to itself (a First), its object (a Second), and for an interpretant (a Third).

In a letter to Lady Victoria Welby, an English semiotician, Peirce (Hardwick 1977:192) provides a formal description of the sign,

A “sign” is anything A which

(1) in addition to other characters of its own,
(2) it stands in a dyadic relation \( r \), to a purely active correlate, B,
(3) and is also in a triadic relation to B for a purely passive correlate, C, this triadic relation being such as to determine C to be a dyadic relation, S, to B, the relation S corresponding in a recognized way to the relation \( r \).

This relation can be diagrammed as in Figure 3.2. Here A corresponds to the Sign, B corresponds to the Object, and C to the Interpretant. T refers to the triadic relation (this is not labeled by Peirce).

Peirce’s sign theory has two important implications. The first is that a sign never exists in isolation; it is always connected to other signs. It is part of an infinite series which points back in time toward the Object and simultaneously points forward into the future toward the Interpretant. The second implication is that signs have a life of their own. Signs have the capacity to generate new signs since the Interpretant of one sign relation can become the Object for another sign relation and so on in a process of endless semiosis. In this sense, the sign can be said to
A typology of signs

The sign relation can be further divided into a series of sign types: the sign in relation to itself, the sign in relation to its object, and the sign in relation to its interpretant (Table 3.2). The sign–sign relation can be divided into Qualisigns, Sinsigns, and Legisigns. A Qualisign is defined as the sensory quality of a sign. An example is the color blue. A Sinsign refers to the specific reality or existence of a sign – for example, a particular billboard on a particular highway. The prefix “sin” is used to mean single and refer to its “being only once.” A Legisign is a law that is a sign. It is a general type of sign which has been defined by convention. It signifies through instances of replicas or tokens. An example is the word “tree,” which refers to a class of objects with specific characteristics. Sinsigns presuppose qualisigns since all objects that exist perforce possess some qualities, while Legisigns, in turn, presuppose Sinsigns.

Peirce divides the sign–object relation into Icons, Indexes, and Symbols. Icons are signs that refer to an object by virtue of its characteristics. They are “mimetic,” an example being a diagram or a painting. An Index is a sign that denotes its object by being affected or modified by that object. It can be thought of as a pointer or indicator – for example, a weathervane is an index that indicates the direction of the wind. A Symbol is a sign that obtains its character by virtue of some law, usually an association of general ideas. In this case, meaning is the result of convention. For example, a flag has no inherent meaning, yet it is commonly taken as a symbol of a country. All indexes involve icons and all symbols are indexical because they act through tokens or replicas.

Peirce divides the sign–interpretant relation into Rhemas, Dicents, and Arguments. A Rhema is a sign of existence that is neither true nor false. For example, individual words, by themselves, have meanings, but these cannot be said to be true or false until they are organized into a sentence. A Dicent is a sign that is either true
Table 3.3  The ten sign types.

<table>
<thead>
<tr>
<th>Sign Type</th>
<th>Example</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualisign-icon-rheme</td>
<td>feeling of red</td>
<td>2.254</td>
</tr>
<tr>
<td>Sinsign-icon-rheme</td>
<td>individual diagram</td>
<td>2.255</td>
</tr>
<tr>
<td>Sinsign-index-rheme</td>
<td>a spontaneous cry</td>
<td>2.256</td>
</tr>
<tr>
<td>Sinsign-index-dicent</td>
<td>weathervane</td>
<td>2.255</td>
</tr>
<tr>
<td>Legisign-icon-rheme</td>
<td>diagram</td>
<td>2.258</td>
</tr>
<tr>
<td>Legisign-index-rheme</td>
<td>demonstrative pronoun</td>
<td>2.259</td>
</tr>
<tr>
<td>Legisign-index-dicent</td>
<td>street cry</td>
<td>2.260</td>
</tr>
<tr>
<td>Legisign-symbol-rheme</td>
<td>common noun</td>
<td>2.261</td>
</tr>
<tr>
<td>Legisign-symbol-dicent</td>
<td>proposition</td>
<td>2.262</td>
</tr>
<tr>
<td>Legisign-symbol-argument</td>
<td>syllogism</td>
<td>2.262</td>
</tr>
</tbody>
</table>

or false and is capable of being translated into a proposition. A proposition consists of a subject that is an index of a Second existing independently of its being represented and a predicate that is an icon of a Firstness, or quality. An Argument is a sign which represents the object as a law in a full triadic relation. It regards the object as an instance of a general class of Arguments which will converge to the truth.

The three trichotomies produce 27 possible sign combinations. Of these, however, only ten actually occur (Table 3.3). This is because every qualisign is an icon, every icon is a rhema, every symbol is a legisign, and every argument is a symbol. This follows from Peirce’s hierarchical principle that only a possibility (a First) can determine a First, only an existent (or Second) can determine a Second or degeneratively a First, and only a law (a Third) can determine a Third or degeneratively a Second or First (2.235).

This typology thus yields ten signs where each sign is made up of three sign combinations. The ten signs and their examples, are as follows:

(1) A rhematic iconic qualisign is “any quality insofar as it is a sign” (2.254). Peirce’s example is a feeling of red. Taking each aspect of the sign individually, the rhematic aspect signals essence, the iconic aspect refers to properties of its own that are similar to those of its object, and the qualisign aspect describes a quality which is what it is on the basis of its own characters (Lee 1997:121).

(2) A rhematic iconic sinsign is “any object of experience insofar as some quality of it makes determinate the idea of an object” (2.255). Peirce’s example is an individual diagram. In this case, the rhematic aspect of the sign signals essence, the sinsign aspect embodies certain qualities, and the iconic aspect refers to properties of its own that are similar to those of its object (Lee 1997:121).
(3) A _rhematic indexical sinsign_ is “any object of direct experience insofar as it directs attention to an Object by which its presence is caused” (2.256). Peirce’s example is a spontaneous cry. Here the rhematic aspect of the sign refers to essence, the sinsign aspect is indicated by the very spontaneity of the cry (it is a unique event), and the indexical aspect is caused by its capacity to draw attention to the utterer (Lee 1997:122).

(4) A _dicent indexical sinsign_ is “a sign which affords information concerning its Object by being really affected by its Object” (2.257). Peirce’s example is a weathervane. In this case, the dicent aspect of the sign signals actual existence, the indexical aspect refers to the capacity of the sign to point to its object, and the sinsign aspect embodies certain qualities. The weathervane example actually has an iconic element because its position is similar to the direction in which the wind blows and contains a rhematic indexical sinsign because it draws attention to the wind which is responsible for its position (Lee 1997:123).

(5) A _rhematic iconic legisign_ is “any general law or type, insofar as it requires each instance to embody a definite quality which renders it fit to call up in the mind the idea of a like object” (2.258). Peirce’s example is a diagram apart from its factual individuality. Here, the rhematic aspect of the sign refers to essence, the iconic aspect to properties of its own that are similar to those of its object, and the legisign aspect to a relation expressed by the production of a token (Lee 1997:123). Each token is a rhematic iconic sinsign.

(6) A _rhematic indexical legisign_ is “any general type or law which requires each instance of it to be really affected by its Object as merely to draw attention to that Object” (2.259). Peirce’s example is a demonstrative pronoun. Again, the rhematic aspect of the sign refers to essence, the indexical aspect to the capacity of the sign to point to its object, and the legisign aspect to a relation expressed by the production of a token (Lee 1997:123). Each token is a rhematic indexical sinsign.

(7) A _dicent indexical legisign_ is “any general type or law which requires each instance of it to be really affected by its Object as to furnish definite information concerning its Object” (2.260). Peirce’s example is a street cry by a vendor. Here, the dicent aspect of the sign signals existence, the indexical aspect to the capacity of the sign to point to its object, and the legisign aspect to a relation expressed by the production of a token (Lee 1997:123). Each token is a dicent indexical sinsign. The street cry example contains an iconic legisign to signify the information being called out and a rhematic indexical legisign to draw attention to the person crying out. In addition, each token of the street cry functions by means of its tone and content as a genuine index of its utterer.

(8) A _rhematic symbolic legisign_ is “a sign connected with its Object by an association of general ideas in such a way that its Replica calls up an image in the mind which image, owing to certain habits or dispositions of that mind, tends to
produce a general concept, and the Replica is interpreted as a sign of an Object that is an instance of that concept” (2.261). Peirce’s example is a common noun. Here the rhematic aspect of the sign refers to an existent, the symbol aspect to a relation with its interpretant, and the legisign aspect to a relationship using tokens (Lee 1997:124).

(9) A **dicent symbol** **[legisign]** is “a sign connected with its object by an association of general ideas, and acting like a rhematic symbol, except that its intended interpretant represents the dicent symbol, in respect to what it signifies, as being really affected by its Object, so that the existence or law which it calls to mind must be actually connected with the indicated Object” (2.262). Peirce gives an ordinary propositional statement as an example. In this case, the dicent aspect of the sign signals existence, the symbol aspect to a relation with its interpretant, and the legisign aspect to a relation expressed by the production of a token (Lee 1997:125). A proposition such as “women are wise,” indicates that the object of the sign “women” are wise. It may be true or false, but it contains no internal grounds for determination.

(10) An **argument** **[symbolic legisign]** is “a sign whose interpretant represents its object as being an ulterior sign though a law, namely, the law that the passage from all such premises to such conclusions tends to the truth”(2.263). Peirce’s example is a syllogism. The argument aspect of the sign refers to a sign that is represented by its interpretant as a sign of law, the symbol aspect to a relation with its interpretant, and the legisign aspect to a relationship using tokens (Lee 1997:125). The three kinds of arguments are deductions, inductions, and abductions. Deductive arguments are based upon syllogistic reasoning and logical quantification. A syllogism is a statement such as “All men are mortal. Socrates is a man. Therefore Socrates is mortal.” Inductive arguments depend upon statistical inference. Abductive arguments are the best hypotheses for a given set of circumstances.

In a note to Lady Victoria Welby, Peirce represents these sign possibilities using an inverted triangle diagram (Figure 3.3).24 This diagram is to be read as follows: the number at the top left of the triangle refers to the Object of the Sign, the number at the top right refers to the Interpretant, and the number at the bottom refers to the Sign itself. Expressed in a linear fashion where the order of numbers refers to Object–Sign–Interpretant, the vertices of the triangle are given by 3-3-3 (top left), 1-1-1 (top right), and 2-2-2 (bottom). The signs identified by these positions correspond to an argument (3-3-3), a dicent indexical sinsign (1-1-1), and a rhematic iconic qualisign (2-2-2). Along the top are an iconic legisign (3-3-1) and a rhematic symbol (3-1-1). Along the right side are an iconic sinsign (2-1-1) and a rhematic indexical sinsign (2-2-1). Along the left side are a dicent symbol (3-3-2) and a dicent indexical legisign (3-2-2). At the center of the diagram is a rhematic indexical legisign (3-2-1).
Peirce continued revising his typology of signs throughout his life. By 1906, he had expanded it to ten trichotomies which produced a total of 66 classes of signs. These included one kind of qualisign, ten classes of sinsigns, and 55 classes of legisigns (Weiss and Burks 1945:387–388). Later, he acknowledged the possibility of more than ten trichotomies and speculated that the total number of sign classes was probably somewhere between 66 and 100 (cited in Gorlée 1994:66). His comments on his sign typologies are especially enlightening.

My classification of signs is not yet fully matured. I have been at work upon it, or at least have had it in mind since 1867, but still confidently expect important improvements in it. If I live to complete it, it will be the contribution to exact logic that has cost me the most labor, and it will be recognized by exact logicians as a very positive and indisputable contribution to exact logic even if I should leave it in its present imperfect state (cited in Gorlée 1994:66).

Peirce and Modern Philosophy

Peirce’s philosophy has had a markedly different reception on either side of the Atlantic. Some American philosophers, such as Dewey, Royce, and Putnam, have
hailed his pragmatism and used it as a basis of pragmatic philosophy. Others, such
as Popper and Quine, have identified linkages with analytic philosophy. British
and European philosophers, by contrast, have been largely skeptical. Bernstein
(1995:xxi) has suggested that the European reaction can be attributed to the per-
ception that pragmatism was little more than an ideological expression of vulgar
American materialism. Even those philosophers who were aware of James’s work,
such as Bergson, Husserl, and Wittgenstein, were ignorant of Peirce’s philosophy.
This situation is changing today and British and Continental philosophers are now
giving his work serious critical attention.

As we have already seen, Peirce initially established pragmatism as a maxim
underlying the scientific method and not as a kind of philosophy. His friend
William James expanded this notion to form the foundations of a pragmatic
philosophy. John Dewey (1910), who had studied with Peirce at Johns Hopkins
University, advocated the pragmatic view that knowing is a kind of doing which he
called “instrumentalism.” Josiah Royce (1900) addressed the problem of the indi-
vidual and the collective and offered the idea of community as a meditative process.
Among the modern pragmatists, Richard Bernstein (1983:71–72) has argued that
Peirce “not only challenges the characteristic Cartesian appeal to foundations, but
adumbrates an alternative understanding of scientific knowledge without such
foundations.” Hilary Putnam (1990) has accepted a version of Peirce’s theory of
truth, calling it “internal realism.” Ironically, two contemporary British philo-
sophers can be counted among his greatest advocates. Susan Haack (1998), in
particular, has vigorously defended Peirce’s pragmatism against Rorty’s (1979,
1982:161) claim that he had little to do with the founding of pragmatism beyond
giving it a name and inspiring William James. Christopher Hookway wrote his
dissertation on Peirce and pragmatism at Oxford and his interests have focused on
such questions as the nature of norms, foundationalism, and altruism (Hookway
2000).

Peirce’s work is an important precursor to analytic philosophy (Hookway 1985).
Many of the distinctive aspects of analytic philosophy can be found, in one form
or another, in Peirce’s writings. These aspects include the theory of relations, sym-
bolic logic, quantification, and verification. Clarence I. Lewis (1929), who had
been invited to Harvard to edit Peirce’s papers, actively sought to join pragmatism
with logical positivism. To some extent he was successful since Rudolf Carnap
(1936:427) wrote, “it seems to me there is agreement on the main points between
the present view of the Vienna Circle … and those of Pragmatism, as interpreted
e.g., by Lewis.” And yet, the major figures of analytic philosophy have tended to
approach his work cautiously and treat it as insightful, but idiosyncratic. Karl
Popper (1972:212–216), for example, has written that Peirce’s fallibilism anticipat-
ed his falsificationism. This seems to be a case of intellectual convergence, since
Popper (1966) has said he wished he had known of Peirce’s work earlier. Similarly, Willard V. O. Quine has acknowledged Peirce’s contributions to logic. However, it is clear that he sees him as a brilliant thinker, who has identified fundamental problems, but who has failed to provide a systematic account. For example, he considers him to be secondary to Frege in the emergence of modern symbolic logic (Quine 1995, but for a counter opinion see Dipert 1995). Moreover, Quine (1960:23) critiqued Peirce’s idea of truth as an ideal theory approached as a limit by means of the scientific method. For Quine, the scientific method offers no unique definition of truth and any pragmatic definition of truth is similarly compromised.

Peirce’s influence on Continental philosophy has largely been realized through the work of Jürgen Habermas and Karl-Otto Apel. In some ways, this affinity was predicted by Rorty (1961) who argued that Peirce had repudiated positivist empiricism some 50 years before its formalization, and had developed a set of insights very similar to those of contemporary philosophers working under the influence of the later Wittgenstein. Habermas (1984, 1989) has made elements of Peirce’s philosophy central to his own political and social philosophy. Particularly important is Peirce’s notion of a community of inquirers. For Peirce, the community of inquirers is a trans-historical notion, acting as a regulative ideal for the growth of scientific knowledge. Habermas adapts the Peircian notion of community in two ways. First, he transforms the regulative ideal into a more concrete entity consisting of actual communities and the dialogue occurring within them. Second, he reinterprets the role of the intersubjective community from leading to truth to generating communicative action.

Apel (1995) has also offered an insightful analysis of Peirce’s semiotic. He holds that it is obvious that analytic philosophy, with the aid of formal logic, has progressed much farther than Peirce’s formulations in terms of technicalities. But he also notes that the syntactic–semantic approach borrowed from logical positivism is fundamentally inferior to Peirce’s semiotic approach. He writes, “the two-dimensional [syntactic–semantic] approach forces philosophers of science to reduce the metaphysical problems of the so-called pragmatic dimension, that is, problems regarding the subject who interprets and engages in science, by making them problems of an empirical science” (Apel 1995:192). He further suggests that Peirce’s logic was balanced with a concern for humanist questions. For example, Peirce’s “instrumental reason” was constrained by the transcendental notion of a community of interpreters. Apel (1995:193) terms this “logical socialism,” and defines it as the view that “the world cannot be known or explained merely by its previously fixed, lawful structure, but must rather continue to be developed as a historical, social world of institutions and habits for which we must assume responsibility.”
Peirce and Modern Linguistics

Peirce’s impact on modern linguistics was primarily due to Roman Jakobson and Émile Benveniste and their work on indexicality. Jakobson has the distinction of being the first linguist to acknowledge Peirce’s work in print. In his closing remarks at the Joint Conference of Anthropologists and Linguists held at Indiana University in 1952, he noted that Peirce was “one of the greatest pioneers of structural linguistic analysis” and that he “not only stated the need for a semiotic but drafted, moreover, its basic lines. His fundamental ideas and devices in the theory of symbols, and particularly of linguistic symbols, when carefully studied, will be of substantial support for the investigation of language in its relation to other systems of signs” (Jakobson 1971: 555–556).

Peirce had a profound and lasting effect on Jakobson’s work (Waugh and Monville-Burston 1990). In 1957, Jakobson (1957) published an important monograph entitled “Shifters, Verbal Categories, and the Russian Verb.” In it, he defined duplex structures where the message and underlying code are both vehicles of linguistic communication. Examples include reported speech, names, autonomous mode of speech, and shifters. Shifters are a particular kind of grammatical unit that cannot be defined without reference to their message. Following Peirce, he noted that they belong to a class of indexical symbols since they both represent an object by convention and point to the object they represent. The classic example is the personal pronoun I where I assumes the existence of the person uttering I. In his paper entitled “Quest for the Essence of Language,” he observed that while all linguistic signs are symbols they may, in addition, be iconic and thus have a relationship of similarity between signified and signifier (Waugh and Monville-Burston 1990). This is true across syntax, morphology, phonology, and poetry. He extends this idea even farther in his book *The Sound Shape of Language* (Jakobson and Waugh 1979). Together these publications provide a powerful critique of Saussure’s principle of arbitrariness.

Émile Benveniste (1971) is best known for extending Peirce’s ideas on deixis. He noted that the referent of the first and second persons, *je* and *tu*, is necessarily new each time they are used. Contrary to other signs in language, they can have no referents outside of the particular speech events in which they occur. Similarly, demonstratives such as “this” (*ce*) and adverbs such as “here” (*ici*), “now” (*maintenant*), “today” (*aujourd’hui*), “yesterday” (*hier*), and “tomorrow” (*demain*) belong to the same category of deictic terms whose referents are restricted to their context of utterance. Benveniste then shows that there is no concept...
of *je* to which all instances of *je* can refer. The first- and second-person pronouns thus contradict Saussure’s requirement that all signs (signifiers) must refer to fixed concepts (signifieds). *Je* can refer only to the speech act in which it is used and in which it designates the speaker. This analysis of personal pronouns has had a strong impact on literary theory.

### The Life of the Sign

The scholar who has perhaps come the closest to emulating Peirce’s “Grand Vision” is the late Thomas Sebeok, a professor of linguistics, semiotics, and Central Asian studies at Indiana University. As early as 1968, Sebeok held that Peirce’s semiotics offered a “vision of new and startling dimensions” and that it might capture the meaning of life (Sebeok 1968:69). He writes, “(a) mutual appreciation of genetics, animal communication studies, and linguistics may lead to a full understanding of the dynamics of semiosis, and this may, in the last analysis, turn out to be no less than the definition of life” (Sebeok 1968:69). Over the next three decades, Sebeok published a series of influential books and articles on semiotics (e.g., Sebeok 1976, 1979, 1981, 1986, 1991a, b, 2001). These ranged widely across what he defines as “normal” semiotics, the linguistic enterprise devoted to man as a cultural being sometimes called *anthroposemiotics*, and *zoosemiotics*, the study of man as a biological being. In the process, he established, or contributed to, such diverse fields as phytosemiotics, mycosemiotics, microsemiotics, and endosemiotics. His “global semiotics” consists of these two partially overlapping approaches (Sebeok 2001).

Sebeok’s biosemiotic approach examines how all animals are genetically endowed with the capacity to produce signs in order to insure their survival. Each species produces and interprets specific signs that are biologically determined. These range from simple body signals to more complex forms such as words. These signs allow a member of a particular species to signal its existence, to communicate with members of the same species, and to interpret information from the external world (Sebeok 2001:3). Sebeok differentiates animal and human semiosis on the basis of intentional knowledge-making activity. Animals produce and interpret signs instinctively in order to survive. Humans, by contrast, produce and interpret signs in order to know the world. Human semiosis is geared toward fundamental aspects of existence such as “knowing, behaving purposefully, planning, socializing, and communicating” (Sebeok 2001:8). Since human semiosis is culturally specific, the signs people use on a daily basis constitute a mediating template in their worldview.

Like Peirce, Sebeok (2001:43–60) was interested in sign typologies. He devised a system consisting of six signs. A *signal* is a sign that mechanically triggers a
reaction on the part of the receiver. An example is the report of a starter’s pistol at
the beginning of a footrace. A symptom is an automatic, non-arbitrary sign such
that the signifier is coupled with the signified in the manner of a natural link.
The classic example is in medicine where a symptom is a sign of a disease. An
icon is a sign where there is a topological similarity between the signifier and what
it denotes. An example is a painting such as the Mona Lisa where the image of
Mona Lisa represents Leonardo’s model. An index is a sign where the signifier is
contiguous with the signified or is a part thereof. An example is the tail-wagging
dance of the honey bee where the direction of the dance points to the location
of flowers. A symbol is a sign with a conventional link between the signifier and
signified. A name is a sign which has an extensional class for its designatum. For
example, individuals with the proper name Veronica have nothing in common
beyond the fact that they answer to the name Veronica.

Summary

Despite Peirce’s reputation as a brilliant thinker, his influence on the sciences and
humanities has been somewhat mixed (Ketner 1981, 1995). He is often identified
as the first to have established a particular field of research or method of logical
analysis, but the conclusion that is usually drawn is that this fact is only of historical
interest and not relevant to the continuing development of the field or method.
The assumption is that we have “moved beyond Peirce” and that his views, while
undeniably novel, were of his period. Ketner (1981) has called this perspective
“the doctrine of Peirce’s interesting failure.” This view is often compounded by
assertions that he never produced a synthesis of his philosophy.

Today, it is clear that this “failure thesis” can no longer be maintained. Peirce is
currently enjoying a flurry of interest in the academy (Colapietro and Olshewsky
1996; Ketner 1986, 1995). In some ways, this is not surprising since his interests
were remarkably catholic, encompassing the fields of astronomy, cartography,
chemistry, economics, engineering, literature, logic, mathematics, medicine, met-
rology, philology, psychology, and theater, to name but a few. Peirce, in fact, made
substantive contributions to several of these fields. For example, he was the first
scientist to use the wave-length of light as a unit of measurement, the inventor of
the quincuncial projection of the sphere that permitted the creation of a map of the
earth with minimum distortion, and the designer of the first electronic switching-
circuit computer (Fisch 1981:17). He did pioneering work on the magnitude of
the stars and the shape of the Milky Way (De Waal 2001:1). Much of this interest
has been facilitated by the greater accessibility of his work due to the publications
of the Peirce Edition Project.
Peirce’s greatest contribution to science is his view of synechism as the connectedness of all life and semiosis as the process of growth. For him, the world does not consist of two kinds of things, things which are meaningful and things which are not. It is rather that everything is meaningful; all objects in the world are potentially objects of signification. Related to this is his move away from the Cartesian focus on knowledge of a thing through its causes, to knowledge of a thing by virtue of how it affects the knower. The knower and the object of knowledge are thus intimately associated through representational action. This is the basis of his pragmatic maxim that he considered the foundation of science. Peirce regarded Truth not as some absolute, but rather as the product of a community of interpreters pursuing knowledge over the long run.

Peirce has had his greatest influence on philosophy and linguistics. His pragmatic philosophy has received considerable attention, beginning with his contemporaries William James, John Dewey, and Josiah Royce and extending to the present in the work of Susan Haack and Christopher Hookway. His approach anticipated analytic philosophy in its focus on symbolic logic and computational analysis. However, the leading analytic philosophers, such as Karl Popper and Willard V. O. Quine, were cautious in their engagement with his ideas. Ironically, it has been the Continental philosophers Jürgen Habermas and Karl-Otto Apel who have applied his ideas and offered some of the most insightful critiques of his work. Peirce’s influence in linguistics is quite specialized and can best be seen in the areas of indexicality and deictics. These topics were developed by Roman Jakobson and Émile Benveniste and modified as we will see in the next chapter by Michael Silverstein. Finally, his “Grand Vision” of the life of signs has been explored most actively by Thomas Sebeok and underlies the growing field of biosemiotics.
I would urge the application of Peircean semiotic to the problems of culture theory and suggest that we call such explorations “semiotic anthropology” … a semiotic anthropology is a pragmatic anthropology.

Milton Singer (1984:50, his emphasis)

In the past two and a half decades, a series of eclectic and diverse approaches united by a shared interest in Peircian semiotics have begun to shape American anthropology. This movement encompasses in varying degrees the subfields of linguistic and sociocultural anthropology and is largely associated with scholars who received their training at the University of Chicago. These approaches all share a strong commitment to a pragmatic perspective on language and culture. To a large extent, this movement can be seen as a measured response to the limitations of symbolic, structural, and cognitive anthropology. In addition, it is also a critique of certain excesses of poststructuralism, particularly the notion of radical ambiguity.

It is important to state at the outset that this new engagement with semiotics does not now constitute a coherent approach or school. Different scholars emphasize different aspects of Peirce’s writings for different purposes. Yet having said this, many have found Peirce’s tripartite concept of the sign relation to be compelling. Many have been attracted to his ideas about identity and social consciousness. It is also important to acknowledge that this positive engagement with Peirce has not meant the rejection of Saussure’s entire program of structural linguistics. Indeed, many scholars are exploring the complementary aspects of Peircean and Saussurean approaches and suggesting that the weaknesses of the one are offset by strengths of the other.
Pragmatic anthropology embraces a wide range of distinctive approaches. Perhaps the most important is indexicality, the sign mode that signals the contextual existence of an entity. This is a key topic in linguistic anthropology where research has focused on deitics, referential language, and linguistic ideologies. Another topic is identity and the relationships of self and society. Here scholars have seen Peirce’s insights about distributed identity as a means of going beyond the Cartesian mind–body dualism. Yet another topic is the study of how material culture mediates social relations. In this case, scholars approach material culture as distinct from, but complementary with, language in the semiotic mediation process. In what follows, I review the origins of pragmatic anthropology and turn to a consideration of its main themes.

Peircian Encounters

The beginnings of a semiotic or pragmatic anthropology derive from concurrent developments in linguistic and social anthropology at the University of Chicago in the mid-1970s. There is, of course, a long and distinguished history of research on semiotics and pragmatism at Chicago in the work of George Herbert Mead, Charles Morris, and John Dewey. Mead (1934) introduced a version of social behaviorism and symbolic interactionism. Morris (1970) developed a theory of signs as part of the famous “Unified Science” project of the logical positivists. Dewey (1946) argued for an instrumentalist theory of education. In a very real sense, the new pragmatic movement led by Michael Silverstein and Milton Singer is a reengagement with this venerable tradition.

Michael Silverstein’s career has focused on demonstrating the systematicity of pragmatic and metapragmatic elements of language structure. In 1974, he participated in an advanced seminar on meaning in anthropology organized by Keith Basso and Henry Selby at the School of American Research in Santa Fe, New Mexico. His chapter in the conference publication is a path-breaking analysis of how different modes of signification give meaning to speech acts (Silverstein 1976). Silverstein’s commitment to pragmatism is clear from the outset. He writes, the “pragmatic” analysis of speech behavior – in the tradition extending from Peirce to Jakobson – allows us to describe the real linkage of language to culture, and perhaps the most important aspect of the ‘meaning’ of speech” (Silverstein 1976:11–12).

Like Saussure, Silverstein begins with a critique of the received view of language. He notes that the standard approach to meaning is to conduct a grammatical analysis of linguistic signs with the goal of identifying their propositional content in socially constituted speech acts. What many scholars fail to recognize is that this approach is only one among many functions of language and therefore provides
only a partial description. He distinguishes semantic meanings, defined as mean-
ings related to reference, from pragmatic meanings, regarded as meanings related
to communication. This distinction is a heuristic one since semantic meanings
are, in fact, a special form of pragmatic meaning.

Following Peirce, he proposes iconic, indexical, and symbolic sign functions as
constituting the three basic modes of meaningfulness. Of these three, indexes are
the key to the pragmatic description of language. Silverstein also discusses how
these modes are combined in a systematic pragmatics. Speech acts are the basic
performative events for specifying the pragmatic meaning of speech signs. Speech
is multifunctional because it can simultaneously be used to constitute distinct
kinds of events. It often incorporates several distinct indexical types. These types
can support one another and emphasize certain meanings. Alternatively, they can
oppose one another as when types signal different meanings, a situation Silverstein
(1976: 47) calls “pragmatic contradiction.”

He then concludes that one of the contributions of a pragmatic anthropology is
to reveal how different societies use linguistic means to create and maintain social
categories. This follows since “(t)he pragmatic system of speech is part of culture –
in fact, perhaps the most significant part of culture – and a part of the structure and
function of which is probably the real model for the rest of culture, when the term
is a construct for the meaning system of socialized behavior” (Silverstein 1976:53,
his emphasis). For Silverstein, language is unique in having a truly symbolic mode.
This implies, of course, that other (non-linguistic) cultural media carry meaning
by variously combining iconic, indexical, and symbolic modes.

Two years after the School of American Research conference, Milton Singer
delivered a paper at the Center for Language and Semiotic Studies at Indiana
University entitled, “For a Semiotic Anthropology.” This paper and its published
version represent an ambitious attempt to reconfigure anthropological theory on
the model of Peircian semiotics (Singer 1978). One of its most valuable aspects
is the systematic comparison of Peircian and Saussurian approaches (Table 4.1).
Singer shows that although these two approaches share similar goals, that is, the
development of a general theory of signs, they differ significantly with respect to
their subject matter, their specific concepts and laws, and their epistemology and
ontology.

For example, the subject matter of the Saussurian approach is natural lan-
guage, literature, legends, and myths, while the subject matter of the Peircian
approach is logic, mathematics, and the sciences. In terms of the sign,
the Saussurian approach establishes a dyadic relationship (signified–signifier)
while the Peircian approach recognizes a triadic one (sign-object-interpretant).
The Saussurian approach regards signs as arbitrary while the Peircian approach
considers icons and indexes as having non-arbitrary relationships to their referents.
Table 4.1  Comparison of Peirce’s semiotic and Saussure’s semiology (from Singer 1984: Table 1).

<table>
<thead>
<tr>
<th>Point of Comparison</th>
<th>Semiotic (Peirce)</th>
<th>Semiology (Saussure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aims at a general</td>
<td>philosophical, normative, but observational</td>
<td>a descriptive, generalized linguistics</td>
</tr>
<tr>
<td>theory of signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Frequent subject</td>
<td>logic, mathematics, sciences, colloquial English</td>
<td>natural languages, literature legends, myths</td>
</tr>
<tr>
<td>matter domains</td>
<td>(logic centered)</td>
<td>(language centered)</td>
</tr>
<tr>
<td>3. Signs are relations,</td>
<td>a sign is a triadic relation of sign, object, and interpretant</td>
<td>a sign is a dyadic relation between signifier and signified</td>
</tr>
<tr>
<td>not “things”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Linguistic signs are</td>
<td>but also include “natural signs” – icons and indices</td>
<td>but appear “necessary” for speakers of the language</td>
</tr>
<tr>
<td>“arbitrary”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ontology of “objects”</td>
<td>existence presupposed by signs</td>
<td>not “given,” but determined by the linguistic relation</td>
</tr>
<tr>
<td>of signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Epistemology of</td>
<td>included in the semiotic analysis</td>
<td>presupposed by but not included in the semiological analysis</td>
</tr>
<tr>
<td>empirical ego or subject</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Saussurian approach holds that the existence of objects is determined by linguistic relations while the Peirsonian approach argues that signs presuppose prior existence. Finally, the actor/speaker is assumed, but not included, in a Saussurian analysis; however, in a Peirsonian analysis the actor/speaker is an integral part of the process of semiosis.

For Singer, there is a decisive reason for favoring the Peirsonian over the Saussurian approach in the development of anthropological theory. This reason is that it contains a theory of the relations of meaning, objects, and behavior. He writes,

In one important respect, at least, a semiotic theory of signs has a distinct advantage over a semiological theory; it can deal with some of the difficult problems generated by acceptance of the complementarity of cultural and social systems. Because semiology limits itself to a theory of signification and linguistic codes, it cannot deal with the problems of how the different cultural “languages” are related to empirical objects and egos, to individual actors and groups … It is possible to deal with such extra-linguistic relations within the framework of semiotic theory, because a semiotic anthropology is a pragmatic anthropology. It contains a theory of how systems of signs are related to their meanings, as well as to the objects designated and to the experience and behavior of the sign users (Singer 1978:50, emphasis in the original).
Singer’s charge was taken up by Elizabeth Mertz and Richard Parmentier, who organized a seminar on “semiotic mediation” at the Center for Psychosocial Studies at the University of Chicago in 1982 (Mertz and Parmentier 1985). Here semiotic mediation was defined in a classic Peirican fashion as “any process in which two elements are brought into articulation by means of or through the intervention of some third element that serves as the vehicle or medium of communication” (Parmentier 1985a:25).

Mertz and Parmentier organized this seminar in response to the dominance of the symbolic approach in anthropology. As Mertz (1985:1) puts it, “the symbol is only one kind of sign, and the collapsing of ‘semiotic’ into symbolic fails to do justice to the complicated system by which signs carry and constitute sociocultural meanings.” She further argued that “the move ‘beyond symbolic anthropology’ does not deny the important role of symbols in culture, but it does seek to ground the study of such symboling in a broader analysis of signs at the theoretical level, and also in a contextual understanding of the place of signs in society” (Mertz 1985:1).

Mertz and Parmentier invited scholars from anthropology, psychology, and linguistics who were working on theoretical issues as well as empirical problems. The theoretical contributions explored the concept of semiotic mediation in the writings of Peirce (Parmentier 1985a), Vygotsky and Bakhtin (Wertsch 1985), Whorf (Lucy 1985), and Peirce, Frege, Saussure, and Whorf (Lee 1985), as well as a meta-cultural commentary on Mead (Boon 1985). The empirical contributions included papers on the metapragmatics in child language (Hickmann 1985), education and cognitive development (Scinto 1985), gender as a cultural index (Silverstein 1985a), legal ideology and linguistics (Mertz and Weissbourd 1985), Javenese speech levels (Errington 1985), and Shokleng speech styles (Urban 1985). This seminar was the first major attempt to integrate the linguistic and sociocultural trends in pragmatic anthropology.

Indexicality

One of the most important topics in pragmatic anthropology is the notion of indexicality, the mode of signification that signals the contextual existence of an entity. Peirce’s classic example of an index is a weathervane, which is moved by a gust of wind; the weathervane is thus an index of the direction of the wind. There is a relationship of spatiotemporal contiguity between the movement of the wind and the action of the weathervane and an assumption of causality since it is commonly believed that the wind causes the weathervane to move in the
direction of the wind. Peirce identifies sundials, plumbobs, the hands of a clock, and barometers as other examples of indexical signs.

Peirce also observed that linguistic terms can function as indexes. He identified such constructions as proper names, personal demonstratives, and relative pronouns. For example, a proper name is existentially connected with some idea, thing, or person. When one encounters it for the first time it is an index because it points to that idea, thing, or person. However, the second time one encounters it, the name becomes an icon of that index since it stands for something that is already held in one’s consciousness. Other examples are demonstrative pronouns such as “who” and “which.” These words do not, in and of themselves, describe anything. Rather, they demand observational activity and point to the words that have gone before them in a sentence. An index thus represents its object by virtue of a physical connection with it, or because it requires the mind to acknowledge the object.

Referential and nonreferential indexes

Silverstein (1976, 1981, 1985a, 1985b, 1987, 1992, 1993) has systematically developed Peirce’s notion of indexes in language. He makes a useful distinction between referential and nonreferential indexes. Referential indexes, also called “duplex signs” by Jakobson (1957), are indexes whose referential value depends upon their indexical value. One of the examples he gives is the operation of deictics in English. The words “this” and “that” when applied as modifiers to a noun, such as this or that table, point to a particular object. The existence of the table in question must be presupposed for the sentence to be meaningful. As Silverstein (1976:34) puts it, “(s)ome aspect of the context spelled out in the rule of use is fixed and presupposed, in order for the referential contribution to be made. And in this sense, reference itself is once more seen to be an act of creation, of changing the contextual basis for further speech events.” This is also true of other kinds of referential indexes such as tense.

Silverstein notes that nonreferential indexes, or “pure indexes,” do not contribute to establishing reference, but rather signal some particular value in one or more contextual variables. The example Silverstein gives is of sex markers. Some languages, like Koasti, indicate the sex of a female speaker by attaching a suffix to the inflected verb form. This is also the case for deferential indexes where speech signals inequalities of status, rank, age, sex, etc. In the case of the Javanese language, people of low rank use a specific vocabulary set and certain grammatical rules when speaking to people of higher rank, while speakers of high rank use an “unmarked” vocabulary when speaking to people of low rank.
Silverstein’s major contribution to linguistics is his analysis of the varied ways that indexical modes of signification link speech to social life. Some kinds of indexes assist in the act of communication while others help in establishing the communication context. Much of this latter function is unconscious and, therefore, not susceptible to informant elicitation. He suggests that the challenge for anthropology is thus to investigate how different societies use different combinations of semiotic modes to constitute and maintain their distinctive social categories.

William Hanks (1990) has also contributed to the study of referential indexes and developed a holistic framework for deixis. He distinguishes three orienting assumptions underlying current work that he finds problematic. The first of these is concreteness, the idea that deixis lies in the immediate and unquestioned present moment. He explains that we all inhabit a lived space by virtue of our bodily engagement with the world. This lived space seems natural and we take it for granted. The second is subjectivity. This view follows from the concreteness assumption and holds that the subject determines the context of the here-and-now. So to study the here-and-now, one must take an agent-oriented approach. The third is the functional isolation of deixis in language. He notes that Benveniste and Jakobson both insisted that deixis and standard language were structurally different. He then questions each of these assumptions because they ultimately are derived from a misguided view of the world, what phenomenologists call the “natural attitude,” the view that the world is as we perceive it.

Hanks develops a practice-oriented approach that is based upon the “sociocentricity” of deictic reference (Hanks 1990:7). He rejects the assumption of concreteness, arguing that it is based upon false appearance. This follows from the fact that the relation between an agent, body, and action is a social construction. The actor draws upon an immense stock of pre-existing social knowledge. This knowledge, habitus in Bourdieu’s sense, orients and naturalizes action. Similarly, the assumption that the actor is the center of social discourse mistakes the part for the whole. It neglects the role that interaction plays in the production of mutual knowledge and in the negotiation of conflict. And while it is true that shifters are functionally distinct, they are in fact linked to other mechanisms of spatial representation and understanding. According to Hanks, a full analysis of deixis requires integrating it into social life.

Hanks (1990) illustrates his approach in a detailed study of Maya deixis. He explains that his selection of the Maya language for his case study is not due to the sheer number or complexity of its features, but rather because of the elaborate grammaticalization of deixis, the kinds of features it encodes beyond spatial and temporal proximity, and the interactions between the different features (Hanks 1990:16). Maya deictic forms are composed of two morphemes, a base on the vertical axis, which he identifies as Initial Deictics (ID), and a suffix or enclitic
element on the horizontal axis, which he calls a Terminal Deictic (TD). He finds that IDs always occur in the initial position in a sentence, noun phrase, or adverbial construction and that they always precede TDs even when the two forms are discontinuous. TDs always occur in the final position in sentences or phrases. This regularity is basic evidence for the fact that deictics in Maya are united in a single system.

Hanks concludes that reference is a social practice, and deixis is a special kind of reference that closely articulates with other kinds of referencing practices. He writes,

taken as a comprehensive whole, the deictic frame space in Maya is a fundamental sociocultural construct. It stands alongside corporeal, cardinal directional, domestic, productive labor, and ritual frame spaces. Like these, it is made up of a range of potential positions and occupancies, configured in frames and combinations of them. Its constituent frames display specific and detailed homologies with those of the other sociocultural spaces, and they are coarticulated with them in the course of talk. It follows that deixis has a significant contribution to make to ethnographic description (Hanks 1990:516).

Speech styles

Another area of research on indexicality is speech styles, the speaking practices of a linguistic community. An example is Greg Urban’s (1985) study of speech among the Shokleng Indians of south Brazil. Urban identifies “ritual wailing” and “origin-myth telling” as playing significant roles in cultural reproduction. Both of these genres can be considered “marked” as opposed to everyday speech in that they are functionally specific. His analysis thus focuses on the relation between linguistic form and semiotic function.

Ritual wailing is a culturally constructed verbal expression whose function is to publicly display one’s emotions of grief and sadness. Among the Shokleng, it tends to involve a sing-song intonation, a “creaky” voice, and rapid glottal stops coupled with intonational modulation. Urban’s thesis is that these features of ritual wailing are not random, but rather are motivated. They actively facilitate the creation of the emotional state. This is accomplished by a semiotic move; “the speech style becomes a cluster of icons through which one looks out at the larger linguistico-cultural system, and draws the indexically relevant meanings to bear on the present case” (Urban 1985:124).

The origin-myth telling of the Shokleng is a performance involving two men speaking in a ritually proscribed fashion (Urban 1985). The first man speaks the first syllable of the myth and the second man repeats it. The first man then utters the second syllable and so forth so that the account is repeated syllable by
syllable. This performance occurs during mortuary ceremonies. The past deeds of the ancestors are reenacted by the living as a form of cultural transmission and the speech style is thus a form of metapragmatic commentary. Urban further observes that there is another style reminiscent of the origin-myth telling that accompanies the social initiation of children when lip plugs are given to infant boys and thigh tattoos are given to infant girls. Here two groups of men stand in lines opposite one another and monosyllabic words are stated by the men in the first line and repeated by those in the second line. The two styles are thus iconic of one another and bring together the ideas of death and the creation of cultural beings.

Urban’s study demonstrates speech styles are multifunctional having iconic, indexical, and semantio-referential sign modes. They serve to join together different parts of the language and cultural system in order to focus emotional attention on a particular event or context – the death of a kinsman and the initiation of a child. Speech styles are thus culturally constructed signs that help in the creation and transmission of culture.

Reported speech

Reported speech is prior speech reproduced by a speaker in a narrative context. Parmentier (1994) has conducted a study of the political function of reported speech among the people of Belau in Micronesia. Following Silverstein (1976), he suggests that speech has metalinguistic, or higher level, functions since it involves speaking about speaking (glossing), establishing conventional rules about speaking (performatives), and creating the speech context (as in deixis). Within the metalinguistic level, he distinguishes language about linguistic forms (metasemantic level) from language about the indexical or pragmatic relationships between linguistic signs and their use contexts (metapragmatic level). Parmentier links speech acts to political power by drawing upon Bakhtin’s notion of “authoritative utterances,” language that sets a particular tone and is widely cited, imitated, and followed. He notes that in both conversational and rhetorical speech there is a complex interplay between reporting and reported speech, “between an outer authorial frame and an inner represented image of another’s speech” (Parmentier 1994:72). For him, political speakers exhibit considerable creativity in reporting authoritative speech. They use quotes taken from such things as traditional wisdom, memorable sayings, and proverbial expressions to facilitate their agenda. Legitimacy is thus established through iconically represented authoritative speech.

Parmentier then provides a linguistic analysis of a speech given by a Belau chief to the Ngeremlengui municipal council in the context of a bitter struggle over a newly drafted national constitution. The context is the rivalry between
two political factions – the pro-constitution force led by two delegates to the constitutional convention and the pro-Free Association force led by Ngirturong, the traditional chief of the district – during the summer of 1979.

On July 7, international observers from the United Nations Visiting Mission met with people from Ngeremlengui at Ngeremetengel village to insure that everyone was informed and the elections would go smoothly. After the observers departed, Parmentier observed that Ngirturong’s authority was challenged by a second ranking chief, Ngiraklang, and by three other villagers, who claimed that he was trying to kill the constitution and had failed to inform the local people of what was happening. Parmentier relates that he was shocked by the overt challenge to a chief’s power. He then watched in amazement as a middle-aged woman, “possessed” by the god Uchererak, spoke out against the debate holding that Belau was not a democracy, but rather subject to the rule of traditional chiefs. This event effectively halted the debate and caused the chiefs to discuss who was the appropriate person to speak the words of the god.

A week later, the Ngeremlengui municipal council held a meeting. Here Ngirturong sought to control the discourse and prevent a discussion of the previous week’s events. Ngiraklang, however, demanded the opportunity to be heard and finally petitioned the elected magistrate after being repeatedly denied by Ngirturong. Ngiraklang then delivered an impassioned speech that drew an analogy to events that had taken place in 1966 when the authority of the chiefly council was challenged and the high chief left the village in anger. He also referred to events from 1934 when the village god began a period of protracted silence that only ended in 1979.

Parmentier then shows that the speech receives much of its rhetorical force from the parallelisms of meaning across these temporal contexts and from the use of proverbial and normative expressions that help establish the authority of the speaker. Some of the metapragmatic elements include references to ongoing speech events (“My speech is like this”), references to other speech events (“affairs from about 1966”), references to speech types (“who in Imeiong is capable of commanding Uchererak”), glosses (“The meaning was like this”), reports of utterance tokens (“He said, ‘I am not going to pay the fine’”), and reports of proverbs (“like we say, ‘the death of the canoe which races with the goatfish’”). By virtue of his status and his role in past events, Ngiraklang is typifying rather than merely reporting village history. He is lent an authoritative aura through the use of iconic quotations. In fact, the entire speech is an indexical icon since its performative force presupposes Ngiraklang’s role.

Parmentier also considers the speech’s textuality, that is its linear or syntagmatic architecture, which contributes another metapragmatic dimension to its effectiveness (Figure 4.1). He proposes that the speech can be understood as an indexical
Figure 4.1  Textual organization of Ngiraklang's speech (after Parmentier 1994: Figure 4.1).
Signs of Meaning

icon in the Peircian sense since it is a contextually anchored diagrammatic sign. For ease of analysis, he divides the speech into ten segments labeled A to J. Segments A, the preface, and J, the closing, bracket the entire speech event with the preface serving to indicate what the audience will hear and the closing signaling the speaker’s changed feelings about the village of Ngeremlengui as a result of making the speech. Parmentier next identifies a parallel structure for Segments B, C and F, G whereby the former refer to historical narratives of past crises and the latter to their resolutions. Segments D and H are commentaries on the meanings of the events (B, C) and their resolutions (F, G). Segment E shifts the referential level and indicates that the speech is about reminding people of these events and not about attaching blame. Segment I takes the whole speech as its object and pronounces the central theme, namely “don’t ever scold the chief in public.” Parmentier observes that the apparent symmetry conceals an underlying asymmetry which is marked by the quotation of a long list of proverbs in segment H. He interprets this as part of the process of focusing attention on the chiefly aura at the moment when the speech shifts from being a reflective characterization to a performative political act.

Linguistic ideology

Linguistic ideology is the term used to describe how local communities conceive of the linguistic forms that they use. This topic was pioneered by Michael Silverstein and has grown to encompass a host of approaches, some of which are only peripherally related to Peircian semiotics (see Kroskrity 2000; Schieffelin et al. 1998). In a clear repudiation of Saussure’s langue/parole distinction, Silverstein (1985a:220) has remarked, “the total linguistic fact, the datum for a science of language, is irreducibly dialectic in nature. It is an unstable mutual interaction of meaningful sign forms contextualized to situations of interested human use mediated by the fact of cultural ideology.” That is to say, ideology can often affect, and even distort, the linguistic structure that it represents.

It is widely accepted that linguistic forms often serve as indexes of social groups. What is less often explored is how this works. Susan Gall and Judith Irvine (Gall 1998; Gall and Irvine 1995,) have suggested that the system of linguistic contrasts and the system of social categories are recognized by speakers and often elaborated, systematized, and rationalized. These elaborations make use of three semiotic properties. In the first case, the sign relations between linguistic features and social identity is transformed through a process they call iconization. In this case, an ideology joins a particular linguistic feature to a social group through parallelism. Related to this is the notion of recursiveness. This involves the projection of an opposition relevant at one
level of relationship to another level. For example, intragroup distinctions may be promoted to intergroup distinctions. Finally, the third semiotic property is erasure. This is when an ideology simplifies a sociolinguistic field and focuses attention on one aspect. By this process, other aspects are rendered invisible. Gall and Irvine conclude that all three semiotic processes act to associate specific linguistic varieties with specific peoples and rationalize sociolinguistic differentiation.

Silverstein (1998) has extended this point to develop a theory of culture where the immanence of ideology resides in the dialectic of indexicality. He makes the point that when signs point to a presupposed or potential context in which they occur, they depend crucially upon metapragmatic function to achieve a degree of textual coherence. As he puts it, “ideology construes indexicality by constituting its metapragmatics” (Silverstein 1998:128). That is to say, ideology contours the actor’s understanding of what counts as an indexical relationship.

Self and Social Identity

Another key topic in pragmatic anthropology is the cultural construction of identity, particularly the relations of self and society. The standard view of identity is derived from the Cartesian notion of the self-conscious individual — cogito ergo sum. Peirce, however, devised a notion of identity based upon relations between organisms as well as relation within the individual organism. Personal identity is thus not limited to the consciousness of one’s body, or carnal consciousness. Rather, it extends to “social consciousness” by which “a man’s spirit is embodied in others, and which continues to live and breathe and have its being very much longer than superficial observers think,” and “spiritual consciousness which constitutes him [as] one of the eternal verities, which is embodied in the universe as a whole” (Peirce Edition Project 1998:3). The boundaries of personal identity are thus fluid and variable.

Signs of the self

Milton Singer (1981, 1984) is one of the first anthropologists to explore a semiotic theory of self. For him, a Peircian approach avoids some of the problems with the standard humanist and scientific approaches to identity. It avoids subjectivism by denying that there is any intuitive knowledge of the self. All knowledge is based upon observation and inference from external facts. Singer cites Peirce’s statement that, “one is immediately conscious of his feelings, no doubt, but not
that they are feelings of an ego. The self is only inferred” (5:462, his emphasis). It avoids objectivism by reinterpreting the self–object relationship in terms of an irreducible triadic relationship between sign, object, and interpretant. This sign relation constitutes a process of semiosis which avoids the mechanistic causality of stimulus and response, or of self and environment.

Singer (1984:159) observes that “in a semiotic anthropology, the consistency of language, and of sign systems generally, is not independent of and parallel to the consistency of feelings, of actions, of thoughts, [it is] as if iconic, indexical, and symbolic signs, respectively, mirrored each of the psychological categories.” He then emphasizes Peirce’s notion of habit as a self-analyzing and self-correcting disposition to act in a certain way under a specific circumstance. It is this notion that gives Peirce’s theory of the sign its pragmatic dimension. He concludes, “the making and remaking of habits, subject to self-control through muscular effort and ‘acts of imagination,’ constitute the chief means for the formation and growth of the self” (Singer 1984:159).

In his analysis of contemporary Indian identity, Singer finds a remarkable convergence between Indian concepts of yoga and Peirce’s categories. He relates indigenous notions of bhakti yoga to “feeling” in a study of Radha-Krishna bhajan sessions, karma yoga to “action” in a study of Madras industrial leaders, and jnana yoga to “thought” in a study of meditation by lay people and priests. He suggests that industrial leaders, priests, gurus, and saints are not only reinterpreting and restructuring signs and symbols of Indianness to accommodate modern innovations, they are also changing some of their own habits of thought and action by reaching out to the future and the past, to the native and the foreign. The clear implication is that the self is only realized through social interaction and that consciousness is a collective property.

Fluid signs

A second example is Valentine Daniel’s (1984) analysis of “substances” as preeminent signs among the Tamil culture of India. Daniel draws from Geertz’s symbolic anthropology and Peirce’s semiotics to derive a rich interpretive account of Tamil social being. Daniel begins with a critique of caste studies arguing that they have become an end in and of themselves and have prevented studies of symbolic constructs more pervasive than caste. He then draws attention to the fact that jati, meaning “genius” and mistranslated as caste, is a property not only applied to humans but to plants, animals, and even inorganic materials. Jati is itself the product of a generative system of ranked cultural units he calls “substances.” These include the substance of the village, the house, one’s sexual partner, and one’s own bodily health.
Jati also involves the one substance from which all these other substances derive, namely ur. Daniel (1984:63) notes that the term cannot be easily defined, but it can be approximated by “a named territory that is 1) inhabited by human beings who are believed to share in the substance of the soil of that territory, and 2) a territory to which a Tamil cognitively orients himself at any given time.” A common greeting, for example, is, “What is your ur?” The answer to this seemingly innocent question is profound. It reveals one’s social obligations and kin ties as well as one’s intellectual disposition.

In the Tamil worldview, the self is both a distributed and an individuated category. Knowledge about the other is simply an extension of self-knowledge and can be acquired by means of two modes (Daniel 1984:234). The first of these, inaippal arital, can be defined by the terms to join, unite, coalesce, connection, copulation, and sameness. The second mode, pakuppal arital, means to divide, distribute, apportion, and classify. Daniel terms the former “synthetic knowledge” and the latter “analytic knowledge.” Tamil culture values synthetic knowledge over analytical knowledge. The aim of the individual is to expand self-knowledge to completely encompass knowledge of the other. At this point there is neither self-knowledge nor knowledge of the other, only pure knowledge (arivu or vidya).

This worldview finds strong resonance with Peirce’s idea of the individual. Daniel (1984:41–42) quotes from Peirce,

A person is not absolutely an individual. His thoughts are what he is “saying to himself,” that is, is saying to that other self that is just coming into life in the flow of time. When one reasons, it is that critical self that one is trying to persuade; and all thought is whatever is a sign, and is mostly of the nature of language. The second thing to remember is that the man’s circle of society (however widely or narrowly this phrase may be understood), is a sort of loosely compacted person, in some respects of higher rank than the person of an individual organism (5.421).

Daniel concludes that while cultures can be understood as webs of signification (following Geertz), it is important to recognize that some cultures may choose to favor one sign modality over others. For example, Western cultures tend to valorize indexical and symbolic signs. These refer to both cause and effect and arbitrary relationships. Hindu India, in contrast, emphasizes iconicity and relationships of similarity (Daniel 1984:40, 231). The Tamil category of “substance” is the overarching metaphor for society and it tends to attract all other signs toward itself. It is directly implicated in the expansion of self in the face of contrary and differentiating forces. Knowing someone’s ur is based upon the principle of shared substance across individuals. This is thus how pure knowledge is to be achieved and equilibrium maintained.
A third example of the study of self and society is Nancy Munn’s (1986) reinterpretation of the famous kula ring among the Gawa of Papua New Guinea. Standard ethnographies have regarded this distinctive social practice as a problem of exchange and approached it from functionalist (Malinowski 1922) or symbolic (Weiner 1976) perspectives. Munn’s contribution is to treat it as constituent of an intersubjective spacetime linked to value transformations. Her central premise is that social actors seek to construct their identities and control their social world through specific transformative acts related to the creation of value. She suggests that certain media, particularly the body, canoes, and kula shells, exhibit “qualisigns of value” generated by social acts of food sharing and personal consumption. Acts of positive value creation extend spacetime, the web of self–other relations formed in and through practices. However, these positive acts are opposed by negative acts, the most extreme form of which is witchcraft, which contract spacetime. Value creation is thus a “complex symbolic process, both a dialectical formation of the symbolic system of meanings and an ongoing dialectic of possibilities and counter-possibilities” (Munn 1986:3).

Munn begins her study with a discussion of food transmission as a key form of value transformation. It is embodied in the Gawan concepts of generosity (lalasi) and selfishness (mulamola) which imply opposite social acts. The generous person is described metaphorically as “wide handed” or someone who readily opens their hand to give food. This extends one’s spatiotemporal value as visitors take away with them accounts of Gawan hospitality. The selfish person, by contrast, is someone who holds food back. Here the possibility for extending spatiotemporal value is reduced. A “strong kula man” or guyaw is someone who feeds visitors, while a “weak man” is one who eats. There is thus a dialectical tension between sharing with a positive value and hoarding with a negative one.

Munn then explores the semiotic links between the body and the signification of value. Here she borrows the term “qualisigns” from Peirce to refer to certain embodied qualities such as heaviness or lightness, speed or slowness, and light or darkness that are components of the Gawan intersubjective spacetime. For example, excessive eating is thought to make the body heavy (mwaw) and slow (mwaw-utu). It leads to sleep. This is opposed to ritual dancing where the body is conceptualized as lightweight and buoyant (gagaabala). Old age and illness (i-ban-kara-mwaw, when a person has “found his or her heaviness”) are associated with slow motion and are contrasted with youth and its attributes of vitality and speed. These embodied value states can be ordered along a symbolic continuum of bodily spacetime whose poles are defined by a contraction (sleep,
weakness, death) on one end and an expansion (health, vitality) on the other (Munn 1986:105).

Munn then proposes her innovative model of the kula ring as a value transformation process mediating two different orders of subjective conversion. The first of these orders is “influence.” When a Gawan man receives a shell from a donor, it is a concrete representation of his ability to persuade the donor to remember him and give him the shell (Figure 4.2). She writes, “shells as circulating media can be understood in general as objective embodiments of previous and future subjective conversion processes connecting transactors and recipients” (Munn 1986:115). The second order is “fame.” This refers to that aspect of the person that circulates apart from a person’s physical presence; “it is as if the name takes on its own internal motion traveling through the minds and speech of others” (Munn 1986:105). Significantly, it requires a third party. This third party hears about the kula transaction and spreads this information to others. The knowledge that a man has of the transactions of distant others and the knowledge that they have of him mutually entail one another. Fame is thus an iconic coding of influence where the original transaction is transformed at the level of discourse. It is a “virtual form of influence” (Munn 1986:117).

![Figure 4.2](image-url) Muribikina, a high ranking kula necklace on Gawa in 1980 (Munn 1986: Plate 6).
Material Culture Meanings

Yet another area of pragmatic anthropology is the study of material culture meaning. These studies reveal that material culture, like language, often plays a central role in mediating social identities and relations. However, they also show that material culture does not participate in the same kind of structured system as language. Objects are not words and there is nothing in material culture comparable to syntax or grammar in linguistics. But because material culture has form and substance, it has the power to fix meanings in ways that are not possible with language.

The cult of the amulets

One of the earliest examples of the study of material meanings is Stanley Tambiah’s (1984) classic analysis of millennial Buddhism in Thailand during the nineteenth and twentieth centuries. Tambiah employs concepts from Peirce to interpret what he calls the “cult of the amulets.” This cult refers to the high regard in which Thai people hold certain forest monks and their obsession with acquiring religious medallions blessed by past and present monks. This cult is all the more remarkable because it crosscuts class, gender, and power distinctions. These forest monks, termed saints (arahants), were universally credited with extraordinary wisdom, love, and charismatic power. Tambiah also notes an increased participation by the common people in Buddhist meditation, a practice that was traditionally associated with monks.

These images and amulets, typically worn on a necklace or chain, carried on the person, or kept in the home, are held to have sacred or supranormal powers. According to one of Tambiah’s informants, the power of these amulets is ranked according to three qualities – the age of the amulet (the older it is, the more valuable it is), the fame of the monk who sacralized it, and the power it has given to previous owners (the price paid to own it) (Tambiah 1984:219). And yet, he notes that the popularity of the cult of the amulets could not solely be attributed to old amulets. Many new amulets were being produced and blessed by living monks.

The most famous of these were the amulets associated with the forest monk Luang Pu Waen. A total of 21,000 medals were minted in 1978 to fund the building of a shrine commemorating King Naresuan located at the entrance of the police headquarters in the Maetaeng District. These medals, known as King Naresuan medals, have a relief of Luang Pu Waen on the obverse and an inscription bearing the name of King Naresuan on the reverse (Figure 4.3). Luang Pu Waen sacralized
the medals by means of a series of ritual acts including reciting sacred words and sprinkling them with holy water.

Tambiah then proposes that these medals have a “double presence” that can be understood with reference to the Peircian concepts, indexical symbol and indexical icon. The Nauresuan inscription relates to a past that is a national historical tradition and, at the same time, evokes this past in a present state of national crisis and warfare. The Luang Pu W aen image refers to a contemporary monk whose saintly virtues radiate outwards to his followers and disciples, but are ultimately derived from an ascetic tradition of meditation. Tambiah concludes that the amulets thus mediate present and past by objectifying history in the present, by bringing different saints and events into association in a market, by acquiring the biographies of their owners, and by creating a national identity through their circulation.

Signs in and of history

Richard Parmentier (1985b, 1987) has developed a study of time and temporality among the people of Belau in Western Micronesia. Parmentier takes as his starting point the fact that all societies exhibit some form of history in which different states of society are expressed by signs in a range of media which are organized according to local forms of categorization. He is particularly interested in three issues – how history is connected to notions of time, how power is expressed by
the control and destruction of historical events, and the variety of media used
to code historical consciousness. He seeks to rehabilitate the term “history” and
show that “the intentions and intentionality of people who create and interpret
their own past is essential, rather than supplementary, to adequate ethnological
study” (Parmentier 1987:7).

Crucial to his analysis is the distinction between two categories of signs – “signs
in history” and “signs of history.” The former refers to value-laden objects implic-
ated in social strategies that focus attention on specific historical processes. He
regards these signs as the loci of historical intentionality. The latter kind of sign
describes the particular ways in which a society objectifies its past. It permits
the discourses of history, particularly how historical knowledge is recorded and
transmitted. He considers the relationships between these two kinds of signs to be
complex and observes that in traditional, non-literate societies “signs of history”
are often simultaneously “signs in history.” According to Parmentier, anthropology
needs to reorient itself towards how material culture signs come to be implicated
in social action, their dynamic and fluid roles in manipulating, contesting, and
concealing meanings.

Using ethnographic data from Belau in Micronesia, he identifies three kinds of
material culture objects as examples of these historicizing signs (Table 4.2). These
are village stones, stone grave pavements located in front of chiefly houses, and
Belau “money” used in social exchange. There are four named stones associated
with each of the four principal villages that form the “cornerposts” of the political
order. These stones are “descendants” of the four stones born of the goddess
Milad and are part of the discourse about villages and their relationships. For
example, Imiungs, the capital village of the Ngeremlengui district, is associated
with Imiungsadab (Imiungs stone), the oldest son of Milad. Melekeok, a satellite
village, is linked with the second son, Olekeokekelbad. Here political hierarchy
recapitulates birth order within the family. These stones are “signs of history” in
that they mark “long duration” time and mediate the permanence of the political
order, implying that it was preordained by the gods.

<table>
<thead>
<tr>
<th>Sign Class</th>
<th>Social Object</th>
<th>Hierarchy</th>
<th>Modality of Time</th>
</tr>
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<tbody>
<tr>
<td>Village stones</td>
<td>Villages</td>
<td>Capital-satellite</td>
<td>Long duration</td>
</tr>
<tr>
<td>Grave pavements</td>
<td>Houses</td>
<td>Principal-affiliate</td>
<td>Social time</td>
</tr>
<tr>
<td>Bead money</td>
<td>Persons</td>
<td>Chiefs-commoners</td>
<td>Individual time</td>
</tr>
</tbody>
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Table 4.2  Relation of sign class, social order, hierarchy and modalities of time (from
Parmentier 1985b:Table 1).
A second kind of object, grave pavements, play much the same role for houses as the stones do for the villages. In each village, there are four ranked social groups or lineages around which lesser groups are clustered. At Imiungs, for example, these chiefly houses are named Klang, Ngerturong, Ngerutelchii, and Sibong. Each residence is fronted by a rectangular paved area containing the graves of male and female ancestors. This area thus serves as a physical reminder, an index in Peirce’s terms, of the house’s genealogical history. The burial act itself marks out important people who are “strong” members of the house and codes marriage alliances, descent ties, and chiefly titles. Because these stone pavements exist at each of the four houses, they also permit the differentiation of lineages. Together, they mediate the village’s social structure in “social time,” the life of the ranked lineage.

A third kind of object is Belau money. It consists of “names, precious beads, cylinders, and bracelet sections” which originated from the Phillipines, Indonesia or neighboring islands in antiquity (Parmentier 1985b:141). There are two broad categories of money. The most valuable are red and yellow ceramic rings called bachelor that are worn as necklaces by the wives of wealthy men. They are named and used to pay relatives at the annulment of marriage or death of a spouse. Because they circulate between high ranking houses, they index descent genealogies, social rank, and appropriate marriage partners as women are encouraged to pursue specific valuables that have been alienated by marrying their owners. The second category is the black spherical bead called chelebucheb. These beads are used mainly in transactions between chiefs as they establish political alliances, pay off insults, or purchase head trophies. Unlike the village stones and grave pavements, Belau money functions at the level of individual time as they mediate discourses of marriage, chiefly alliances, and inheritance.

The risks of representation

In a study inspired by Munn’s work, Webb Keane (1997) has examined regimes of value and risks of representation among the Anakalang of Sumba, Indonesia. He focuses on public rituals which establish what he calls “representational economies” through the exchange of valuables.

Keane begins with a critique of the standard Western view of agency. The usual practice is to locate agency in biologically distinct individuals. Among the Anakalangese, however, the most authoritative agents are entities such as households, clans, and interclan alliances. The agency of these entities is expressed in those ritual contexts where two groups face one another, make speeches, and exchange valuables in what Keane calls “scenes of encounter.” He notes that the relative location of agency is thus liable to shift subject to the process and outcome of the encounter.
Traditionally, valuables (*dati*) are exchanged during important social transactions, such as weddings, land sales, peace making, and mortuary rituals. These valuables are of two types. Goods given by the wife’s natal family (*ngaba wini*) are *mamuli* (omega shaped, metal objects), machetes, swords, spears, horses, and buffalo. Those given by the husband’s family (*yera*) are cloth and pigs. These consist of everyday objects, like cloth and machetes, as well as specialized objects, such as the *mamuli* metal pendants worn around the neck. In any ritual exchange, a gift from one category must be matched with a gift from the other.

Following Peirce, Keane suggests that these valuables can be interpreted as iconic, indexical, or symbolic signs. He notes that there is no a priori reason to privilege one sign mode over another. Any given culture may identify a particular object with one or more kinds of signs simultaneously. Having said this, he emphasizes the importance of indexical signs arguing that because they are less conventional than symbols, they can help naturalize social conventions such as authority and status. They thus establish relationships between causal and logical meanings and facilitate the linkage of the political economy to authoritative representations.

Keane then shows how Anakalangese representational practices – including verbal, material, and performative – combine in complex ways to mediate the construction of power and authority. For example, ritual speech is crucial in all formal transactions. The effective speaker is able to “shake the leaves from the tree, make the vines echo” (Keane 1997:98). Words are thought to have direct physical effects and thus function not only as symbols, but also as indexical signs. Keane cites as an example the ancestral story of Ubu Pabal who wished to marry Rabu Robu. Rabu’s father was opposed to the match and gave him a series of dangerous tasks – one of which was to tame the wild animals. Ubu Pabal accomplished this with only his voice – when he called the animals out of the forest, they obeyed. Keane notes that while the modern Anakalangese do not expect the same results, they nonetheless attempt to emulate the speech of their ancestors and thus gain access to some of its potency.

One of Keane’s most original contributions is his thesis that representational practices come with inherent risks and hazards. These are derived from the need to cooperate and coordinate with others. The most talented speaker cannot act without exchange valuables just as the highest ranked noble cannot succeed in public without ties to sisters and wives. This view poses two important critiques of functionalism. First, ritual cannot be reduced to economic goals although economic goals are implicated through indexical signs. Second, the orderly functioning of ritual practices is not necessarily the desired outcome. Rites must risk failure in order to carry social meanings. The representation of risk is thus a means of managing uncertainty and validating successful outcomes.
Summary

Peircian semiotics is an increasingly important component of modern American anthropology. From its introduction in the mid-1970s, it has now grown to occupy a key position in the fields of linguistic and cultural anthropology. Its major contribution has been its pragmatic view of culture and its commitment to understanding the culturally specific ways in which sign relations mediate social being. Signs function not simply to represent social reality, but also to create it and effect changes in that reality. Signs have agency by virtue of their ability to generate other signs. The control of this process permits the fixing of meanings, as sign combinations come to be interpreted together as semiotic ideologies. But, this process is inherently unstable and those same sign combinations can be confronted by alternative readings and reinterpreted as new semiotic ideologies.

In many ways, Peirce’s notion of indexicality lies at the heart of linguistic anthropology. It is obviously of immediate relevance in studies of deictics, such as those pursued by Jakobson (1957), Benveniste (1971), Silverstein (1976), and Hanks (1990). However, indexicality is also the basis for studies of socio-semiotic studies of social practices. Peirce offers an innovative way of breaking down the classic self and society dichotomy. He suggests that self can only be realized through society. This insight has been taken up in different ways by Singer (1981, 1984), Daniel (1984), and Munn (1986). This concept also finds strong resonance with Marilyn Strathern’s (1988:13) idea of the “dividual.” By this concept, she means that identities are not bounded in the Western sense, rather they are partible and divisible. They are made up of the social relations in which they reside. This is especially clear in the case of gender among the Melpa and Wiru peoples of Melanesia. As Strathern (1988:14) puts it, being “male” or “female” is a transitory state that only emerges under particular circumstances.

Yet another topic in pragmatic anthropology is material meanings. Significantly, pragmatic studies draw upon the sign mode of indexicality. Unlike the spoken word, material culture possesses attributes, such as durability and scarceness, that can be manipulated for social advantage. Tambiah (1984) has shown how the circulation of Buddhist amulets helps establish a Thai national identity. These amulets function as indexical symbols and indexical icons to mediate temporality and objectify history in the present. Parmentier (1985b, 1987) has documented the ways in which material objects come to be implicated in the cultural coding of history, their dynamic and fluid roles in manipulating, contesting, and concealing meanings. Keane (1997) reveals how representational practices mediate power and authority.
A Peircian semiotic anthropology enjoys certain compelling advantages over its Saussurian rival (Keane 2003; Parmentier 1997:xv). It does not privilege language as the model for semiotics, rather it offers a more general model which incorporates language, social practices, and material culture. Related to this, it addresses the socialness of language and material practices without reducing the one to the other. Most significantly, it addresses what Peirce (Houser and Kloesel 1992:233) calls the “Outward Clash” of the real world. By this term he means how the direct consciousness of hitting something or getting hit by something enters into our cognition and makes something real. This is to say that it is a realist, rather than an idealist philosophy. For this reason, a Peircian semiotic is particularly well suited to the development of a pragmatic archaeology.
PART II

Aspects of a Semiotic Archaeology
When we ask for the meaning of the symmetries or other formal structures, when we consider whether the symmetries in the pottery decoration are transformations of those in the organization of settlement space, or in burial practices, and when we relate such structures to abstract structures in the mind, we begin to move from formal to structuralist analysis.

Ian Hodder (1986b:41)

The relationship of semiotics and archaeology is properly approached through a consideration of structuralism. Structuralism, broadly conceived, is a way of thinking about the world in terms of structures that are themselves composed of individual entities organized in relations of mutual dependence. This thesis was expressed as early as 1725 in Giambattista Vico’s *The New Science* (Hawkes 2003). In the modern period, structuralism encompasses concepts of totality, self-regulation, and transformation that are common not only to linguistics and anthropology, but also to mathematics, physics, biology, psychology, and philosophy. It underpins such topics as general systems theory, ecosystems, network analysis, cybernetics, and information theory, all of which developed in the 1930s and 1940s. Commenting on its growing popularity, Ernst Cassirer (1945:120) observed that structuralism was a “general tendency of thought that has become more and more prominent in almost all fields of scientific research.”

Structuralism, conceived more narrowly, is usually associated with the linguistic approach of Ferdinand de Saussure (see Chapter 2). Saussure emphasized the study of deep structure, that is, rules, grammar, and models, in contrast to surface phenomena, such as speech acts, which he considered accidental and variable.
phenomena. This focus on structure, while valuable and important, had the effect of detaching language from its social context. In the 1960s, Claude Lévi-Strauss and Roland Barthes elaborated Saussure’s approach and applied it to the study of social and cultural phenomena. Largely due to their work, the language model spread rapidly across the humanities and social sciences in the 1970s and 1980s. It was especially popular in literary theory and criticism (Culler 1975, 1981; Hawkes 2003). There are also strong connections to Freudian psychoanalysis and Marxist theory. Jacques Lacan (1977), for example, used Saussure’s model to retheorize the Freudian unconscious. This widespread influence of structuralism during this period is popularly called the “linguistic turn” (Clark 2004).

Processual archaeology, also called the new archaeology, is the name given to an approach to the scientific study of culture process that emerged in the early 1960s. Culture process is usually defined as “the operation or structural modification of systems” (Binford 1962:217). Processual archaeology encompasses a family of closely allied projects including analytical archaeology (Clarke 1968), anthropological archaeology (Binford 1962; Gillespie and Nichols 2003; Longacre 1970; Meggars 1968), behavioral archaeology (Reid et al. 1975; Schiffer 1976, 1995), cognitive archaeology (Renfrew and Zubrow 1994), economic archaeology (Bailey 1983; Earle and Christenson 1980; Higgs 1975; Sheridan and Bailey 1981), environmental archaeology (Dincauze 2000; Shackley 1981), evolutionary archaeology (Dunnell 1989; Maschner 1996; O’Brien 1996; Shennan 2003), historical processual (Pauketat 2001, 2003a, b), Marxist archaeology (Gilman 1989; McGuire 1992; Spriggs 1984; Trigger 1984, 1993), social archaeology (Redman et al. 1978; Renfrew 1984), and spatial archaeology (Clarke 1977; Hodder and Orton 1976). There are important differences between these different approaches. For example, some are largely theoretical while others are more methodologically oriented. Nonetheless all share a common processual orientation grounded in cultural evolutionary theory and a systemic view of culture.

Structural archaeology developed as one of the subfields of processual archaeology in the late 1960s. Surprisingly, there are very few reviews of this literature (but see Conkey 1989; Gosden 1994; Hodder 1982b, 1986b; Leone 1982, 1986; Wylie 1982). This is unfortunate since, although never a dominant approach, structuralism has nonetheless had a significant impact on the character and content of modern archaeology. In its more general form, it is responsible for the rise of processual archaeology. In its more restricted form, it is implicated in the critiques of processualism and the emergence of postprocessual archaeologies (see Chapter 6). It is also intimately linked to the current developments in cognitive archaeology (see Chapter 7). In many ways, structuralism is an intellectual bridge spanning radically different theoretical programs. In this chapter, I give a brief review of the discursive practices associated with processual archaeology and then focus on
three main research areas: rules and codes, information exchange, ideology and structural Marxism.

A Brief History of Processual Archaeology

The 1960s was a period of dramatic change in U.S. society. In 1957 the U.S.S.R. launched Sputnik and simultaneously ushered in the space race and the Cold War. This single event rapidly transformed the political climate and created a new urgency to fund science. From 1958 to 1959 Congressional appropriations for the National Science Foundation jumped from 40 million to 130 million dollars, more than a three-fold increase in spending (National Science Foundation 1958, 1959). Much of this increase can be explained by funds transferred to the Foundation for the Atomic Energy Commission. This was the era of “Big Science.” By the mid-1960s, this reorientation of resources began to have an effect in the public sector as economic growth slowed and wages declined (Patterson 1995, 2001). Coupled with this was a high level of social unrest. Antiwar demonstrations challenged the legitimacy of the Vietnam War. College students occupied university buildings to demand civil rights. Organized labor sought better working conditions and higher wages. This unrest was held in check largely due to the interests and influence of the finance community (Patterson 1995).

In this context, Lewis Binford and his students at the University of Chicago introduced an explicitly scientific approach to explaining the past which came to be known as the “New Archaeology.” What was new was its placement of theory building, particularly systems theory, ecological theory, and evolutionary theory, at the core of archaeological research. This new focus contrasted with the particularistic nature of the standard traditional or culture–historical archaeology and had the advantage of directly linking archaeology to other newly reformulated sciences, such as evolutionary ecology, sociology, and human geography. Simultaneously, David Clarke (1968) at Cambridge University offered a somewhat different, but largely parallel, version of the new archaeology that emphasized quantitative and analytic methods borrowed from many of these same sciences. Enthusiasm was high and some even touted this movement as a “paradigm shift” in the Kuhnian sense because it was perceived as marking a radical break with the approaches and methods of culture–historical archaeology (Leone 1972; Sterud 1973).

In an attempt to make archaeological explanation more rigorous, the new archaeology embraced the tenets of positivism and the covering law model of explanation. Positivism refers to the philosophical framework adopted by the members and associates of the Vienna Circle. Among its most notable advocates were Moritz Schlick, Rudolf Carnap, Otto Neurath, Hans Reichenbach,
Aspects of a Semiotic Archaeology and Carl Hempel. The principle thesis of positivism is that statements are meaningful only insofar as they are verifiable and that verification is only possible by means of the scientific method. There are two kinds of meaning statements, analytic and synthetic. Analytic statements are true \textit{a priori} and are based on the rules of language. Synthetic statements depend on experience, and their truth can be verified only by means of experience. This distinction is the basis of what came to be called analytic philosophy. Metaphysical statements are, therefore, meaningless, since they are neither based upon language, nor are they based upon experience.

For Binford (1968, 1983), culture–historical archaeology failed as a science because it lacked a valid testing methodology. There was no mechanism for gaining confidence in propositions about the past beyond argument from authority. Accordingly, the new archaeologists looked to the philosophy of science for guidance and adopted the covering-law (CL) model of explanation. The covering-law model, introduced by William Dray (1957), requires the phenomenon of interest (the \textit{explanandum}) to be subsumed under a general law (the \textit{explanans}). As Hempel (1965:488) put it, “all scientific explanation involves, explicitly or by implication, a subsumption of its subject matter under general regularities; . . . it seeks to provide a systematic understanding of empirical phenomena by showing that they fit into a nomic nexus.” John Fritz and Fred Plog (1970) promoted the hypothetico-deductive (H-D) method as devised by Hempel and Oppenheim (1948) in their classic account of the logic of explanation. Patty Jo Watson, Steven LeBlanc, and Charles Redman (1971) observed that this method would bring archaeology in line with the other scientific disciplines. Problems with this model identified by logical positivists, however, led to the exploration of several other models, including the Statistical-Relevance (S-R) model (Salmon 1982; Salmon and Salmon 1979).

Systems theory was the most powerful of the new theoretical frameworks to be incorporated by processual archaeology. It identified the appropriate scale of analysis as the interactions involving the exchange of matter and energy between organisms and their environment. Following Leslie White (1959), Binford (1962) defined culture as a system consisting of technological, social, and ideological subsystems which together serve as the “extrasomatic means of adaptation” for the human organism. Culture systems were thought to exist in a state of homeostasis or balance, which became altered only through the action of an external stressor, such as the environment. James Hill (1970), for example, interpreted the abandonment of Broken K Pueblo as the result of recurrent drought and largely ignored the possibility that internal social variables may have been involved.

Kent Flannery further developed the case for systems theory in a series of influential publications. In a paper comparing culture history and processual approaches, he introduced Ludwig von Bertalanffy’s (1950) general systems theory which
asserts that open systems are in continuous interaction with their environments and that these interactions can generate qualitatively new properties through emergence (Flannery 1967). Systems theory thus highlights the arrangement of and relations between the constitutive elements, rather than reducing the system to the properties of the elements. Flannery (1967:119) writes, “there are systems so basic in nature that they can be seen operating in virtually every field – prehistory not excepted. Culture is about as powerless to divert these systems as the individual is to change his culture.”

In a later paper, Flannery (1968) adopted Leslie White’s focus on energy and linked it to Julian Steward’s culture ecology in a study of seasonality and potential scheduling conflicts between different procurement strategies during the Archaic period in Mesoamerica. Influenced by the work of Maruyama (1963), a systems theorist specializing in cybernetics, Flannery argued that seasonality and scheduling were part of a deviation-countering feedback system. That is to say, they held in check the intensification of any one procurement system and thus prevented the overexploitation of any particular wild resource. At the same time, they contributed to a high level of procurement efficiency that minimized change. He considers the fact that Archaic cultures did change to be evidence for the existence of deviation-amplifying processes. These culturally significant changes were associated with genetic changes in certain plants, particularly corn, that came to dominate the subsistence system out of proportion to other foodstuffs.

A central element of the methodology of the new archaeology was spatial modeling and quantitative analysis. Many of these methods were borrowed directly from the new geography (Haggett 1968) and came to be known as “locational analysis” (Clarke 1977; Hodder and Orton 1976). This method was an attempt to model and quantify the popular settlement pattern approach of Gordon Willey (1953, 1956). Classic examples of this kind of research are Timothy Earle’s (1976) nearest neighbor analysis of Aztec cities in the Valley of Mexico and Ian Hodder’s (1972) central place study of market towns in Romano-Britain. Among the most popular tools of quantitative analysis was computer simulation which was applied to a range of topics including the study of trade and exchange, the spread of agriculture, and population estimation (Hodder 1978b; Renfrew and Cooke 1979; Sabloff 1981). With the growing significance of applied archaeology and Cultural Resource Management, locational analysis and simulation became essential tools for predictive modeling (Kohler and Parker 1986).

A series of internal debates quickly developed within processual archaeology. One debate focused on the integrity of the archaeological record and the effects of “site formation processes.” Michael Schiffer (1976) critiqued the views of the new archaeologists who had naively assumed that the archaeological record was a “fossil record” of past behavior. He introduced a discussion of post-depositional
processes, pointing out that they often introduce patterns of their own which “distort” the record. A proper explanation of a given problem must thus proceed first by identifying natural and cultural transforms and then factoring them out to reveal the underlying behavior of interest. Binford (1980) took issue with Schiffer arguing that Schiffer assumed the existence of some real past awaiting to be discovered. For Binford, the archaeological record is the normal consequence of the operation of dynamic living systems and it is generated continuously. This insight challenged the standard opposition of past and present and foreshadowed the dialectical arguments of Hodder (1982c, d, 1986b) and Shanks and Tilley (1987a, b).

Schiffer and his colleagues, J. J. Reid and William Rathje, responded to the fragmentation of processual archaeology by offering behavioral archaeology to unify the field into a coherent program (Reid et al. 1975; Schiffer 1995). The basic agenda of behavioral archaeology is the study of people–material culture relations at all times and places. The unification of archaeology was to be accomplished through the integration of four research strategies (Reid et al. 1975). Strategy 1 is devoted to using material culture produced in the past to answer specific questions about past human behavior. Strategy 2 focuses on contemporary material culture to derive laws of human behavior useful for explaining the past. Strategy 3 is the use of past material culture to generate laws of human behavior. Strategy 4 is the use of present material culture to explain present human behavior. According to this framework, Strategies 2 and 3 are nomothetic or law generating strategies, and Strategies 1 and 4 are ideographic or law using ones.

Another debate turned on the proper role of analogy. Binford (1967) argued that analogy was not to be used for explanation, but rather for the construction of hypotheses about the past that could then be testing against the archaeological record. Explanation was thus a two-step process. Left unresolved was the stopping point, at what stage of testing might an analogy be considered validated. In the late 1970s, Richard Gould offered a pessimistic view on the use of analogy. He felt that archaeology could never hope to address more than a “limited and rather unimportant part of the story of the human species” because of its reliance on material culture (Gould 1980:3). For Gould (1980), symbolic behavior, the most important and interesting aspects of human behavior, can only be understood in contemporary human societies. This meant that ethnography could only be used negatively to identify anomalies, the so-called “spoiler approach.” Patty Jo Watson (1982), on the other hand, took the more positive view that the archaeological record could be used to confront scientific hypotheses. Binford (1985) critiqued Gould claiming that he ignored the role of theory, specifically how it provides a context for interpretation. This debate is particularly interesting in that it contains aspects of a social constructivist position. While arguing for greater objectivity,
Binford (1985:582) explicitly acknowledged that our theories and assumptions fundamentally condition what we accept as fact.

Yet another debate addressed the relationship between archaeology and history. In its zeal to establish itself as a law generating, positivist science, the new archaeology was quick to distance itself from the goals of history. Indeed, history was roundly condemned as narrow and particularizing (e.g., Flannery 1967). Binford (1968), for example, regarded the focus on events as incompatible with or, at least, subsidiary to the investigation of evolutionary process. This perspective was challenged by Bruce Trigger (1978), a Marxist archaeologist, who noted that new archaeologists tended to hold a number of misconceptions about history. These included the notion that the goal of historians was description and not explanation, the idea that historians rely on common sense and not testable theories of human behavior, and the thesis that there is, in principle, no difference between historical and scientific explanations. Trigger further showed that in archaeology, as in biology, history and process are closely interrelated. Similarly, Michael Rowlands (1982) used this devaluing of history as his starting point in his argument for a more holistic Marxist perspective to the problem of synthesizing history and archaeology.

Recently, processual archaeology has diversified broadly (Hegmon 2003). One development is a new engagement with evolutionary theory known as evolutionary archaeology or selectionism. Robert Dunnell (1980, 1989) and his followers have offered the controversial view that natural selection is responsible for functional variation in cultural traits. Neutral or stylistic traits are those traits that are conditioned only by the processes of cultural transmission. Leonard and Jones (1987) have expanded Dunnell’s approach by introducing the notion of “replicative fitness.” For them, there is an important distinction to be made between individuals, who have differential reproductive success, and the traits of those individuals, which have only replicative success. Each trait can thus be considered to have its own fitness value which may or may not affect the fitness of the bearer of that trait. However, others, such as Boone and Smith (1998), have offered sharp critiques of this approach arguing that it represents a misunderstanding of the role of phenotypic variation, and in particular behavioral variation, in the evolutionary process.

Several contemporary approaches have developed in response to the challenges posed by postprocessual archaeologies. These include cognitive archaeology, the archaeology of gender, and the archaeology of agency. Renfrew has established his cognitive-processual archaeology (see Chapter 7) as a considered response to the postprocessual critique while remaining firmly rooted in the processual tradition. Among the main tenets of the approach are the desire to incorporate information about the cognitive and symbolic aspects of early societies, the recognition
of the active role of ideology, the acknowledgment of the constitutive potential of material culture, and the interest in internal conflict as a significant force in culture change. In terms of epistemology, cognitive archaeology seeks to revitalize historical explanation and adopt a modified form of positivism that acknowledges that theory and data mutually interact with one another.

The archaeology of gender has its origins in the feminist critique of processual studies. Margaret Conkey and Janet Spector (Conkey and Spector 1984) are the first scholars to introduce gender and feminism as legitimate topics of archaeological research in Anglo-American archaeology. Most processual archaeologists have adopted the gender-as-biology approach and are exploring empirical questions related to identifying biological women and differential diet, disease, and mortality rates between the sexes. Most postprocessual archaeologists have advocated a gender-as-socially constructed view and used it as a lens to investigate social issues such as identity, class, and race.

Two main techniques are used to identify women archaeologically. The first uses internal or contextual evidence. Typically this approach starts with osteological evidence in burials or with unambiguous depictions of women in iconography. In historical archaeology texts can be used. An example of this type of work is Hastorf’s (1991) study of isotopic values obtained from Sausa male and female skeletons from the pre-Hispanic Andean contexts. The second technique used to identify women involves cross-cultural ethnographic analysis. In this case, the relationships between gender and particular tasks are evaluated. For example, statistically speaking, it is true that hand-made pots are often made by women. Sherratt (1981) uses ethnographic evidence that men tend to do the ploughing in small-scale societies to argue for increased power for men with the adoption of the plough in prehistoric Europe. Clearly, the use of general ethnographic analogy in this way is fraught with difficulties, and some writers prefer not to assume that the role of women in ethnographies can be projected back into the past (e.g., Claassen 1992).

Yet another new approach with postprocessual associations is the archaeology of agency (Dobres and Robb 2000). Ken Sassaman (2000), for example, regards an agency theory which considers gender, structure, and power as having the potential to revolutionize the study of prehistoric hunter–gatherer societies. He analyzes variation in Stallings Island culture container technology in the context of the movement of Stallings groups from the lower into the middle Savannah river valley, an area already occupied by peoples of the Mill Branch culture. He suggests that women were the producers of Stallings pottery vessels and men were the procurers of soapstone, a raw material that was widely traded by the Mill Branch culture. He then proposes that soapstone vessels metaphorically mediated the relation of women/Stallings (pottery) with the raw material of men/Mill Branch (soapstone). He further argues that individuals manipulated this new technology to assert
more inclusive relations among regional populations predicated on bilateral social organization.

Similarly, Tim Pauketat (2000) uses agency theory in his study of the construction of prehistoric platform mounds in the Mississippi valley between A.D. 1000–1200. The standard interpretation is that a newly established elite built these mounds to legitimize their newfound power. Pauketat observes that these monuments did more than inaugurate elite lineages since many are associated with annual construction cycles as part of world renewal ceremonies and ritual purifications. Their purpose then was to bring together people on a regular basis. The laborers, who came from far away to invest in the monumental practice of temple building, created a new scale of social negotiations (from the community to the region). Pauketat then concludes that elite and commoner status were both established and perpetuated through the material practices of moundbuilding.

Rules and Codes

The first steps toward a structuralist archaeology were taken by James Deetz in the 1960s. In his popular book *Invitation to Archaeology* (1967), he defined anthropological archaeology as the study of past peoples in terms of their physical, cultural, and psychological aspects. By identifying the psychological as a legitimate topic of investigation, he immediately broadened the focus of processual archaeology beyond its narrow adaptationalist agenda. He devotes an entire chapter to structure defined as the rules which produce artifacts and govern the combination of their attributes. Although he does not cite Saussure, Deetz’s approach is clearly influenced by structural linguistics. He writes, “in view of the close similarity between the way in which words and artifacts are created, might not words be but one aspect of a larger class of cultural products which includes all artifacts as well?” (Deetz 1967:87). This idea immediately recalls Saussure’s own belief that “by studying rites, customs, etc. as signs, . . . we shall throw new light on the facts” (Saussure 1966:17).

Deetz justifies the application of structural linguistics to the study of material culture on the grounds of a universal cognitive structure. Noting that words and artifacts are both the result of physical action, he proposes that they share a homologous relationship and that there might be fundamental units of meaning in artifacts identical to those in language. He writes,

> Artifacts, like words, are the products of human motor activity, made through the action of muscles under mental guidance on the raw material involved. The resultant form of any artifact is a combination of structural units – attributes – which in any particular combination produce an object which has a specific function in the culture.
which made it. Change any one of these attributes and the functional significance will change if the change is sufficient to affect this significance. In other words, there may be structural units in artifacts which correspond to phonemes and morphemes in language, a correspondence which goes beyond simple analogy, reflecting an essential identity between language and objects in a structural sense (Deetz 1967: 87).

Deetz then identifies factemes and formemes as the basic structural units in artifacts. Factemes are “the minimum class of attributes which affects the functional significance of an artifact” (Deetz 1967:89). For example, an arrowhead can be seen as possessing three attributes – side notching, basal notching, and side form (Figure 5.1). However, only two of these attributes are usually considered to have functional significance, namely the side notching and basal notching, which are related to hafting. Variation in side form, whether it is curved or straight, does not affect function and can be considered to be due to idiosyncratic variation. In a culture where arrowheads are identical with the exception of the presence or absence of side notches, this attribute can be considered a facteme. Indeed, such variation within this facteme can be regarded as an allofact, variation produced by the imperfect expression of the mental template underlying artifact form, just as allophonic variation in language is produced by variation in the speech-producing apparatus.

Formemes, by contrast, are “the minimum class of objects that has functional significance” (Deetz 1967:90). Thus, an arrowhead is a formeme which is combined with other formemes, namely a shaft, fletching, glue, and ownership markings, to create an arrow (Figure 5.2). Most of these formemes can occur separately or in combination in other contexts. For example, a knife may consist of a stone point hafted to a handle with glue or a snow snake may have fletching, shaft, ownership marks, but a blunt end instead of a stone point. Of these formemes, the ownership mark can be considered a bound formeme since it cannot exist alone. That is to say, it requires the presence of the arrow shaft in order to be expressed.

Deetz (1967:93) also proposed a method for analyzing artifact assemblages using a linguistic method. He notes that when linguists compare two languages they often determine whether they are related by the degree to which they share the same vocabulary. However, if they share the same grammatical rules, their relationship is virtually certain. This is because while loan words are readily borrowed from one language to another, grammatical rules are much more resistant to transmission. He then postulates that this method might be applied to archaeology. Two artifact assemblages can be compared and shown to be related, if they share a high degree of similarity in individual attributes. However, confidence in this relationship is increased, if it can be shown that they also share the same rule of combining attributes.
Several of Deetz’s students have extended his structural approach. Mary Beaudry (1988), for example, has conducted an innovative linguistic analysis of foodways vessels in 17th- and 18th-century probate inventories from the Chesapeake Bay region. Drawing from the linguist Joseph Greenberg (1966), she employs marked versus unmarked distinctions. Marked categories are those that indicate the presence of a certain property, while the unmarked category says nothing about its presence. She begins her analysis of the probate records paying special attention to the use of modifiers and adjectives. She focuses on comparative adjectives such as small/large, old/new. The modifiers consisted of composition, age, size, capacity, function, color, shape, weight, contents, and condition. Her results indicate the use of a greater frequency of functional markers toward the middle of the 18th century. She interprets this to mean that there was a greater need to differentiate special function vessels from one another. She also finds that items associated with
individual users increase while those associated with communal use decrease. She concludes that her results are consistent with Glassie’s (1975) and Deetz’s (1977) findings in architecture and ceramics, namely that there is a shift from the natural and emotional in the 17th century to a focus on the artificial and intellectual.
In a study of 18th-century English and American ceramics, Ann Yentsch (1991) argues that a culture/nature opposition underlying ceramic manufacture and use was part of the negotiation of social inequality. Her interpretation of the meaning of white and earth-toned pots is built up from associations and contrasts in the placing of ceramics in male and female, public and private parts of houses. Yentsch also draws parallels between changes through time in ceramic assemblages and changes in the use of space. She also identifies links to variability in the use of spices and in the complexity of recipes and in the proliferation of knives, forks, and spoons. These similarities and differences in apparently disconnected spheres are made sense of in terms of a structural analysis. For example, nothing obviously links the use of natural building materials to a lack of separation in the use of ceramics and in the use of space. But such a link is made possible by the concept of “organic solidarity.” Yentsch uses the binary oppositions of culture/nature and public/private to draw out the similarities in her covarying data. She goes on to argue that these abstractions were used as metaphors in the creation of inequality.

Generative grammar

Some structural archaeologists have drawn inspiration from the generative grammar approach of Noam Chomsky (1963, 1965, 1968). A good example is Jon Muller’s (1977, 1979) structural analysis of 90 Mississippian shell gorgets in the Lick Creek style (Figure 5.3). These gorgets are among the earliest examples of the Southeastern Ceremonial Complex and are widespread throughout the Upper Tennessee Valley. They are decorated with a rattlesnake motif with head, mouth, body, and outer border units. Muller’s goal was to reveal the underlying structures and transformational rules for producing patterning in the different design elements.

Using a formal terminology originally devised by Chomsky, he identified 12 phase-structure rules to account for the observed structural units. For example, the cross unit consists of a line element and an arm of the cross structure and can be represented as:

\[ \text{Cross} \rightarrow l + A \quad \text{(Rule 2)} \]

where \( l \) refers to a line element (a terminal unit that cannot be rewritten) and \( A \) refers to an arm of the cross structure (a non-terminal unit that can be rewritten).

\[ A \rightarrow p + o \quad \text{(Rule 3)} \]

where the cross arm unit is composed of a drilled pit and a cut out area (both are terminal units).
Figure 5.3  A Lick Creek style gorget and its constituent units (Muller 1977:Figures 3, 12).

Similarly, the rattlesnake motif can be expressed as:

$$ R \rightarrow \text{Body} + \text{Head} + \text{Mouth} \quad (\text{Rule 4}) $$

He then identifies a transformational rule that quadruples the repetition of certain elements:

*Transformational Rule*

*Obligatory: Quadrupling rule*

$$ X = A, \ SI $$

$$ X \Rightarrow X + X + X + X $$

In this case, the cross arm and the body design are repeated four times. He also identifies two formal rules for various operations on the symbols themselves.

Muller regards his structural analysis as a rigorous and more formal way of analyzing art styles. For him, style is more than shared similarities in a body of work and properly includes the rules by which specific elements are combined to produce art. Echoing Deetz, he writes, the “persons interested in the identification of ‘cultural influence’ must look at the total structure of art styles rather than just at a few resemblances in form” (Muller 1979:205).

Perhaps the best known and most influential example of the Chomskian approach is Henry Glassie’s (1975) study of vernacular architecture in Middle Virginia. Glassie, a folklorist interested in material culture, argued that artifacts, of which housing is but one example, are worth studying because they yield information about ideas in the minds of people long since dead. This information can supplement and, in fact, challenge the historical record that tends to record the activities of an elite segment of the population.

Adopting Chomsky’s (1968:64) famous distinction between “competence” and “performance,” Glassie proposes that humans have two innate abilities, the ability to compose, which he defines as competence, and the ability to relate the
composition to things external to it in “context.” He states that the result of the interrelations of these two abilities is performance or the observable outcome. Glassie further notes that although competence is often associated with structure and performance with function, it is a mistake to think that an object is first composed and then related to external objects. In fact, “a conception of the object is related to internalized ideas of external objects while the object is being composed” (Glassie 1975:17). That is to say, cognition involves a “synchronous and sympathetic negotiation between interlocking planes of thought.”

Glassie’s goal is thus to analyze architectural competence by creating a model that accounts for the design ability of an idealized maker, what he calls an “artifactual grammar” (Glassie 1975:17). For him, an adequate account of competence must consist of the set of rules that might have been used to generate observable things. These rules are the structure that unites the disparate elements into a coherent, synchronic system. These rules are typically unconscious, although they can be brought into the conscious domain through questioning and contemplation.

Glassie conducted an architectural survey of houses dating from 1760 to 1925 in Louisa and Goochland counties, Virginia, documenting 338 houses. From patterning in these data, he established nine rules. For example, Rule Set I. is termed “Forming the base structure” and consists of four subrules: I.A. – selection of the geometric entity, I.B. – transformation of the geometric entity, I.C. – addition, and I.D. – invariability) (Glassie 1975:21–26). I.C. is further defined as follows,

I.C.  Addition.

The transformations of the square are selected and related.

I.C.1. The whole may consist of a single geometric entity: the whole is one square, in which case it must be either fully square (X) or a larger transformation of the square (Z).

I.C.2. The whole may consist of more than one of the transformations of the square: the whole is two or more of the geometric transformations, in which case one must be square (X) and the others may be square (X) or smaller (Y). Further:

I.C.2.a. Not more than two different classes of shapes may be employed in the same whole.

I.C.2.b. Not more than three shapes may be employed in the same whole.

I.C.2.c. When three shapes are employed in the same whole, one must be of a different class from the others (which by rule C.2.a above must be the same), and it will be located centrally.

I.C.3. Addition is always made symmetrically along the same axis, so that all parts of the whole will be exactly s in depth.
He then establishes a taxonomy of 17 architectural types based upon essential distinctive features. Each is a “structure of structures” (Glassie 1975:35–36).

<p>| | | |</p>
<table>
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<td>X:</td>
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<td>2</td>
<td>X:</td>
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<td>3</td>
<td>Z:</td>
<td>one story</td>
</tr>
<tr>
<td>4</td>
<td>XY₂:</td>
<td>one story; one end chimney</td>
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<tr>
<td>5</td>
<td>XY₁:</td>
<td>one story; two end chimneys</td>
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<td>6</td>
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<td>7</td>
<td>XX:</td>
<td>one story; two end chimneys</td>
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<td>8</td>
<td>XX:</td>
<td>one story; central chimney</td>
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<tr>
<td>10</td>
<td>XX:</td>
<td>two stories; central chimney</td>
</tr>
<tr>
<td>11</td>
<td>XY₃ₓ:</td>
<td>one story; one room deep; central chimney</td>
</tr>
<tr>
<td>12</td>
<td>XY₃ₓ:</td>
<td>one story; one room deep; two end chimneys (central hallway)</td>
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<tr>
<td>13</td>
<td>XY₃ₓ:</td>
<td>two stories; one room deep; central chimney</td>
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<tr>
<td>14</td>
<td>XY₃ₓ:</td>
<td>two stories; one room deep; two end chimneys (central hallway)</td>
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<tr>
<td>15</td>
<td>XY₃ₓ:</td>
<td>two stories; one room deep; paired central chimneys (central hallway)</td>
</tr>
<tr>
<td>16</td>
<td>XY₃ₓ:</td>
<td>one story; two rooms deep; four end chimneys (central hallway)</td>
</tr>
<tr>
<td>17</td>
<td>XY₃ₓ:</td>
<td>two stories; two rooms deep; four end chimneys (central hallway)</td>
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These types, it must be recalled, address the relations between elements and not the character of the elements themselves. Glassie states that the elements, or architectural details, are themselves the product of their own system of relations. So while the basic house structure sets up a relationship between the door and the ridge line, it does not dictate the type of door or roof. Citing Deetz (1967), he proposes that the types of details could be organized into a lexicon of *allo-formemes*, defined as sets of elements that are formally distinct, but functionally identical.

His analysis reveals continuity in design competence that predated the American Revolution and continued up to the advent of the blueprint house. Within this general continuity, he distinguishes three evolutionary phases. During the first phase (1720–60) all the rules necessary to generate house types 1–6 from the base structures, X, Z, XY₂, XY₁, were in effect. A second phase (1760–1810) is associated with the introduction of the Georgian type 17 and a new base structure was adopted, XY₃ₓ, with only a few additional rules and subrules needed. By the final phase (1810–1925), the old XY₂, XY₁ forms were replaced. Glassie interprets these patterns to represent a pattern of initial equilibrium transformed by the appearance
of a competing house type – the Georgian form. A temporary balance was achieved by the incorporation of that house form into the design competence, but over time the hall and parlor houses and the Georgian house fell into disuse. A new balance was achieved with the central hall house that represented an accommodation of the old and new. He further suggests that these patterns are evidence of a society that is schizophrenically attracted to hierarchical organization and control, on the one hand, and to egalitarian activity and individualism, on the other.

Symmetry analysis

Symmetry analysis is one of the most popular methods used to study structural codes in the production of patterns in material culture and architecture (Washburn and Crowe 1988). An influential example is Dorothy Washburn’s (1977) study of Salado Polychrome design using ceramics from four prehistoric Salado sites in central Arizona. She draws an analogy between language as a verbal communication subsystem and art as a visual communication subsystem. “Art forms constitute the visual communication subsystem of a culture and that they too possess a regular structure based on fundamental universal components that also can be systematically classified” (Washburn 1977:6).

Washburn introduced symmetry analysis as a method of analyzing information exchange and social interaction. Beginning with the assumption that the production of pottery is an inherently social act, she proposes that all of the people involved in the process will be in close interaction. She predicts that this kind of interaction should yield painted pottery designs with similar symmetries. She then suggests that population migration and acculturation should be reflected in similarities and differences in design structure. When groups move long distances or join a culture group with different design styles, there should be a change in their design structures.

In general, her results confirm her original hypotheses. They reveal that there was a high degree of similarity of design structures among the Upper Gila area inhabitants and this suggests that there was an interacting community of potters. They reveal that the designs based on a one-dimensional axis were likely locally produced and the more complicated two-dimensional and finite designs were probably non-local products. They also challenge the standard typological approaches to understanding pottery as locally produced or traded. Previous studies had assumed that white ware was locally produced and redware was tradeware. Her analysis of specific designs revealed that not all of the white ware was locally produced and not all of the redware was tradeware.

In another influential study Hodder (1982c) combined symmetry analysis with a generative grammar approach in his ethnoarchaeological study of the decoration
of calabashes among the Nuba of Sudan. In the Mesakin area, calabashes, hut fronts, male bodies, and fighting stick handles are all highly decorated with largely geometric designs. Following Faris (1972), he identifies ten different designs and their referents including three that refer to poisonous snakes, six others that refer to python, mountains, female breasts, anteater, small tortoise, and rain, and one that is non-representational. He suggests that the use of the designs may be related to the desire to provide ritual protection and to draw attention to social boundaries.

Hodder then observes that among the Nuba the placing of the designs within an overall pattern is as important as the designs themselves. There is an emphasis on symmetry and balance. Most of the designs appear to be variations on a star motif that is common in Sudan, Ethiopia, and northern Africa (Figure 5.4). He writes that “the star may have been used as a source for the two components of the design language – ‘words’ and the relations between words” (Hodder 1982c:175). The words or elementary units can be derived from the star and are A, B₁, B₂, and C. The syntactical rules used to build up patterns out of the units can also be derived from the star. The most important of these is that joins take place at the vertices and not along the sides or bases of the triangles or lozenges. Another syntactical rule is rotation around a central point.

He then used computer programming to establish various grammatical rules used in the construction of Nuba designs as follows:

Instructions
A. Choose object and part of object (calabash, house, etc.)
B. Choose starting element (word unit)
C. Begin design generation

Moves  Possible Operations

(1) Move horizontally
   At vertices (if possible or oblique angles) CONnect to (R)ight or (L)eft: CONnect after ROTating (in units of 45° or 90°): EXPand size of element: SKIP
(2) Move vertically As 1, moving Up or Down: SKIP
(3) Fill SOLid fill: DESigned fill of the spaces generated in 1 and 2: SKIP
(4) Rotate ROTate whole design so far completed in units or multiples of 90° and redraw: SKIP
(5) Expansion, reduction EXPand or REDuce size of whole design so far completed by ‘n’ units – a unit being the length of the sides of the A and B elements: SKIP
(6) Repeat REPeat design so far completed n times, VERtically or HORizontally to Right or Left, Up or Down: SKIP
(7) Return RETurn to n° step or starting point
Figure 5.4  The relation of the star motif to common Nuba designs (Hodder 1982c: Figure 81).

Examples
(a) 

Starting point: Choose B₁, ROT (270°), SOL. (Comment: the left triangle is chosen, and obtained by turning B₁ through 270°, and filled.)

1. CON (R) ROT (180°)
2. SKIP
3. SKIP
Hodder considers these generative operations to be useful in testing whether motifs and rules are sufficient to account for all design configurations either within a region or between regions. In this way, the logic of design can be worked out.

Hodder (1982c:) then offers an autocritique of his “linguistic” approach on the grounds that it is abstract, analytical, and unrelated to design creation and its use in social contexts. Moreover, he notes that while the design analysis may be useful in terms of understanding how design elements are built up, the generative grammar itself may be illusory. “The apparent rules may result from the artist’s intention to produce a certain social effect in a particular cultural context, by ‘playing on’, hiding and evoking a widely known pattern” (Hodder 1982c:181). Here we see the first glimpses of a practice-based critique of structuralism (see Chapter 6).

Information Exchange

Another research area in structural archaeology is information exchange. In a classic paper published in 1977, Martin Wobst (1977) proposed a relationship between stylistic behavior and information exchange. He reviews the standard approaches to style, which treat it as form that is left over after function was explained. He argues that style possesses certain functions and suggests that style studies should focus on the investigation of form conveying information. Wobst
illustrates this point in an ethnographic analysis of folk dress in Yugoslavia. He finds that individuals varied their dress far beyond what was needed to adapt to their environment. He interprets this variation as a means of making statements about their social affiliations.

Similarly, John Fritz (1978) argues that ideology should be seen not as secondary to behavior, but rather as contributing directly to cultural adaptation (cf. Flannery and Marcus 1976). For Fritz, ideational systems contribute to adaptation in two ways – they define organizational framework or structures, and they provide the specific content of that framework, the knowledge by which humans survive. He proposes that archaeologists can seek to understand past ideational systems at both these levels by investigating the structures and processes that manifest ideational organization and the systems of rules and meanings that are embodied in symbols.

Fritz identifies architecture as one among several domains that functioned in establishing prehistoric ideational systems. Such systems may be indicated by a set of rules that govern the sequence of construction, by a sequence of experiences that were created by past actors as they moved through architectural space, or by the placement of elements in relation to natural features and/or other elements. Fritz then analyzes the architecture of Chaco Canyon as an example of ancestral Pueblo Indian worldview. He says that this worldview was “conceived as a cosmos composed of differentiated elements, the relations of which were dynamic, yet bounded and restrained” and that it “contributed to the growth and survival of the prehistoric population of Chaco Canyon” and may have contributed to its demise as well (Fritz 1978:41).

Inspired by Washburn’s symmetry analysis, Fritz identifies three types of symmetry – translation, reflection, and bifold rotation – and three different scales – individual structures, villages, and the inner core area. Reflective symmetry occurs at all three scales. For example, at the scale of the individual structure, the great kiva of Casa Rinconada is divided into two symmetrical halves by an axis formed by the north and south entryways. At the village scale, Pueblo Bonito is divided into two symmetrical halves by a series of north/south rooms. At the scale of the core area, the settlement is divided by a north/south axis linking Pueblo Alto, Casa Rinconada, and Tsin Kletzin and an east/west axis opposing Pueblo Bonito with Chetro Ketl (Figure 5.5). Rotational symmetry occurs at the level of the village and core area. For example, at the village scale the two great kivas of Pueblo Bonito oppose one another and are rotated to face one another. At the core area scale, Pueblo Bonito is opposed to Chetro Ketl with the curved back wall of the former balanced by the curved front wall of the latter.

For Fritz, architectural design can be seen as a metaphor for the relations of nature, society, and the sacred. He interprets the evidence for translational
symmetry to signal the social equivalence of towns and the openness of the social system, since additional towns could be placed on the axes. He interprets the evidence of reflective symmetry to reveal a closed social system of balanced duality. Finally, he interprets rotational symmetry to represent sequential alteration (cyclic change) within a closed system.

Another influential example of the use of information theory is Margaret Conkey’s (1978, 1980) study of Paleolithic art. Following Nancy Munn (1966), Conkey argues that art can be understood as symbolic behavior that involves culturally standardized systems of visual representation that function as mechanisms to order experience and segment it into manageable categories. Because the production of art is labor intensive and competes with other activities, she suggests that it must
have had some adaptive value for the individual artist as well as the group. For her, those societies that maximized the intergenerational transmission of information may have enjoyed an adaptive advantage in terms of increased longevity, delayed maturation processes, and/or encoding strategies.

She then reviews the archaeological evidence for human evolution and suggests that a veritable explosion of symbolic behavior occurred sometime after 70,000 years ago and perhaps as recently as 40,000 years ago. She identifies a specific mode of expression as underlying this process. This mode of expression is “iconicity” which she defines as “a sign that signifies by virtue of sharing a property with that which it represents” (Conkey 1982:118). Using Jakobson’s (1962) distinction between effective and designated relationships, she argues that iconicity is seen in the lack of differentiation between the level of the artifact or cave wall and the level of the decoration. “That is, the attributes of the parts are in the whole, the subject matter is in the media and vice versa, such as in the case of the many animals whose shapes are the natural protruberances of cave wall surfaces” (Conkey 1982:118).

Conkey interprets this focus on iconicity to mean that Late Pleistocene peoples were increasingly participating in certain kinds of symbolic behaviors as a means of successfully responding to adaptational stresses, particularly ecological and climatic changes. For her, Paleolithic art can be seen as part of the diversification of symbolic behavior and represents an attempt to reduce the arbitrariness of symbols into manageable categories. She regards style in Paleolithic art to be an informational process that favors behavioral redundancy and predictability and assists in the common organization of different behavioral domains. This, in turn, permits groups to establish identities and maintain social boundaries in relation to other groups.

Ideology and Structural Marxism

The third research area is ideology and structural Marxism. Ideology was originally defined by Binford (1962) as one of the three components of the total cultural system. It existed alongside the technological and social subsystems. While each of these subsystems was, in principle, functionally important and thus equally worthy of study, in practice, processual archaeologists emphasized the technological and social organizational subsystems (e.g., Hill 1970). There was a sense in which ideology was epiphenomenal or generated from the material conditions of social existence rather than being causal in its own right (but see Fritz 1978). This position was explicitly articulated by classical Marxist archaeologists who argued for the primacy of the materialist base over the ideological superstructure (Trigger 1978).
The consideration of ideology as a constitutive factor in social formations is a basic tenet of structural Marxism. The French philosopher Louis Althusser devised an influential account of society by integrating elements of structuralism and Marxism. His project was to rescue classical Marxism from charges of determinism and reductionism (Saunders 1990). He did this by borrowing key concepts from Lacan and Levi-Strauss. Althusser’s structural Marxism has two important elements. First, it holds that ideology and power relations are neither epiphenomenal nor determined by the material base. Rather, they are generative and can dominate society. Second, it regards change as the result of accumulation of structural contradictions within a social formation and not between social relations and the materialist base.

Several processual archaeologists have adopted aspects of Althusser’s structural Marxism. These approaches typically modify classical Marxism by reformulating the evolutionary stage approach, economic determinism, and the base/superstructure model (Bender 1978; Frankenstein and Rowlands 1978; Gledhill and Larson 1982; Kristiansen 1978; Parker Pearson 1984). An influential example is Jonathan Friedman and Michael Rowlands’s (1978) analysis of social evolution. The stimulus for their work is a dissatisfaction with the culture ecology of Julian Steward. For them, his focus upon identifying stages of economic development, considered as specific adaptations to particular environments, neglected not only continuities and discontinuities between stages, but also how they are transformed.

Friedman and Rowlands’s alternative model of social change accounts for the structures of reproduction of particular social forms. According to this model, each level of social formation is structurally autonomous, such that the properties of one level cannot be derived from another. However, the levels are linked together by two kinds of relations. The first is a hierarchy of constraints, or limits, emanating from the ecosystem which determines the functional compatibility between levels. The second is the relations of production that dominate the productive forces and ecosystem. Social change is thus the result of both the dominant relations of production determining a particular developmental pathway and the accumulation of functional incompatibilities within the system. Because evolutionary stages are always generated from previous stages, they term their model “epigenetic.”

Friedman and Rowlands are careful to distinguish structures from the societies in which they are manifest. Structures are determined by the dominant relations of production, namely the internal demands of the system and the distribution of constraints. They write, “the evolution of tribal systems into asiatic states is manifested in the actual development of concrete societies, but this evolution depends on more than the locally manifested structure of the tribal system.
It depends on the existence of a larger system within which the tribal structure can expand and upon whose populations it feeds for its own growth” (Friedman and Rowlands 1978:205). They also emphasize that their model is not a unilineal model like that of Steward or Leslie White. It only appears to be linear under a fixed set of initial conditions. That is to say, if initial conditions were altered, new internal functional incompatibilities would generate different developmental pathways.

Another influential example is Mark Leone’s (1984) study of William Paca’s garden. William Paca was an 18th-century lawyer, patriot, and governor of the state of Maryland. He built his house and formal garden in Annapolis in the Georgian style that emphasizes bilateral symmetry and the segmentation of elements into a hierarchical order. The garden has a central axis dividing two pairs of geometric gardens, each of which is unique (Figure 5.6). The central walkway leads down three sets of steps toward a pond in a wilderness garden in the back. Leone (1984:31) suggests that the whole garden can be interpreted as an exercise in optics, much like a Renaissance painting, where different vantage points are highlighted and emphasized. It demonstrates a growing control over elements of perspective as applied to time and space.

Leone interprets the meaning of the garden with reference to ideology and structural contradiction. He observed that the central contradiction in Paca’s life was that between a slave-holding society and a society proclaiming personal freedom and individual liberty. To mask this contradiction, Paca created a garden which represented dominant cultural notions of time and space and made them seem derived from nature or antiquity through the use of perspective. As Leone (1984:34) puts it,

the formal garden was not an adornment, the product of spare time; it was not for food and still less for idle fashion. It was a place for thinking and for making the observations which were essential to economic and social life. It was not passive; it was very active, for by walking in it, building it, looking at it, admiring and discussing it, and using it in any way, its contemporaries could take themselves and their position as granted and convince others that the way things are is the way they always had been and should remain.

Another development related to structural Marxism is World Systems Theory (WST). This theory, developed by Immanuel Wallerstein (1974, 1980), is a theory of the spread of capitalism. It explores the structural linkages between First and Third Worlds such that development in one area generates underdevelopment in another. The central process is one of exploitation as nation-state cores extract goods from peripheries and redistribute them according to specific rules of allocation. This process is both dynamic and complex since the status of cores
Figure 5.6  The William Paca garden (courtesy of the Historic Annapolis Foundation).
may fluctuate over time, resulting in unstable and changing boundaries. WST has been especially attractive to archaeologists because of the scale at which it operates. It places cultural entities within their larger, historical, political, and economic contexts and is sensitive to the spatial dynamics of control. Most early archaeological applications, however, were generally uncritical and have imposed it directly upon archaeological data (Blanton and Feinman 1984; Champion 1989; Rowlands et al. 1987).

An important example of the use of WST is Phil Kohl’s (1987) analysis of the Bronze Age of the Greater Middle East. Not only does he use the theory to lend insight into his case study, but he also identifies several areas where Wallerstein’s formation is inadequate and in need of additional theorizing. Kohl argues that the late third and early second millennium B.C. consisted of a series of multiple cores, each of which exploited its own hinterland. But the hegemony of cores was only partial and often short lived. Peripheries could choose to establish or cease relations with cores according to their own interests. Kohl identifies two reasons for this. Precapitalist technologies were neither as specialized nor as controlled as they are in modern societies so that it was impossible for cores to maintain monopolies. In addition, precapitalist transportation systems were quite limited. This meant that it was difficult for the core to continually monitor the periphery. These observations represent an important start toward the reformulation of world systems theory as a theory of the history of precapitalist formations.

Recent studies are reevaluating the application of WST in archaeology (Kardulias 1999; Peregrine 1992; Peregrine and Feinman 1996; Stein 1999). Gil Stein (1999), for example, has argued that it overemphasizes the role of external dynamics as opposed to endogenous factors in precapitalist societies. Moreover, peripheries are not simply the passive victims of cores, rather they are dynamic actors. As an alternative, Stein proposes two complementary models for the study of interregional interaction. The first of these, the “distance-parity” model, views world-systems as simply one factor in a broader range of political and economic relations among complex societies. The second, the “trade-diaspora” model, explains variation in exchange systems from the perspective of the traders and indigenous host communities with whom the cores were interacting. He suggests that these models permit the reconstruction of power relations without world-system assumptions of dominance and inequality.

Stein then evaluates his models against the archaeological evidence for the Uruk expansion into the Anatolian highlands during the fourth millennium B.C. Using data from the site of Hacinebi in southeastern Turkey, he discovers that the Mesopotamians did not dominate the people of this far periphery. Stein concludes that
we must look more closely at the local cultures of peripheries to develop realistic cross-cultural models of variation in colonialism, exchange, and secondary state formation in ancient societies. This reevaluation is an important contribution since it reveals that political and economic relations were less coordinated in prehistory than in the modern period with the emergence of capitalism.

Summary

Structuralism, in both its general and linguistic forms, has dramatically transformed the human sciences. It has shifted analytic attention away from entities in and of themselves toward the relationships between them. At its core is the search for universal mental structures, those organizational categories by which the mind is able to perceive the world and establish meaning. The basic justification warranting the extension of the structural model from language to culture is that social and cultural phenomena can be interpreted as signs which are defined not by essences, but rather by internal and external networks of relations (Culler 1973:21).

Structuralism has played a significant, but underappreciated, role in the development of processual archaeology. In its general form, it underlies the use of information theory, network analysis, and systems theory, approaches that were central to the processual program. Renfrew (1986:16), for example, characterizes his peer polity interaction model as a form of structuralism because of its concern with social and symbolic forms that are the product of human conceptualization. As Hodder (1986b:36–40) notes, structural analysis was easily integrated into processualism because of the shared interest in general laws, system theory, positivism, and science.

Structuralism in its linguistic form was embraced by some processual archaeologists and applied to cultural phenomena using linguistic analogies, symmetry analysis, generative grammars, and computer programming. For example, the structural approaches of Deetz (1967), Glassie (1975), and Muller (1977, 1979) that adopted linguistic models focused upon cognitive universals or deep structures that underlie social practice. Similarly, the information theory approaches of Washburn (1977), Conkey (1978), and Fritz (1978), sought to understand information and communication as part of a culture’s adaptive system. These are assumed to be universal characteristics of all cultures regardless of time or place.

Structuralism has also provided the grounds for a powerful critique of processual archaeology. Friedman and Rowlands (1978), and Leone (1984) used Althusserian structuralism to emphasize the constitutive force of ideology in cultural and social formations. Ideology obscures social contradictions by making them seem natural
and timeless. Similarly, Hodder (1986c) drew from structuralism the generative possibilities of rules as they were expressed in specific historical contexts. Structuralist approaches, however, were only partially successful, largely because they tended to minimize or neglect the practice-oriented dimensions of human behavior as individuals and social structures constituted and reconstituted themselves in a social dialectic. These dimensions were the intellectual basis for the emergence of postprocessual archaeologies.
In a sense, of course, archaeology is already post-structuralist—it has already absorbed a version of contemporary theory that, in the work of Giddens and Bourdieu, could be described as leading beyond some of the positions articulated by Lévi-Strauss.

Ian Bapty and Tim Yates (1990b:3)

Poststructuralism occupies a prominent place in the humanities and social sciences (Attridge et al. 1987). Despite its broad popularity, there is no single, generally accepted definition of poststructuralism and even the term itself has been questioned. Manfred Frank (1989) has advocated the term “neo-structuralism” to emphasize the continuity with structuralism. Richard Harland (1987, 1993) has proposed the term “superstructuralism” to refer to a common set of assumptions underlying structuralism, poststructuralism, semiotics, structural Marxism, Lacanian psychology, and Foucauldian cultural studies. Regardless of the label, poststructuralist approaches all start from a critical relationship with structuralism (Sturrock 1986). Generally speaking, they tend to reject monothetic and deterministic approaches and embrace such concepts as subjectivity, discourse, gender, and identity. In addition, they are sensitive to the inherently contingent nature and situatedness of texts and meanings.

Poststructuralism bears an especially close relationship with postmodernism. Indeed, postmodern theory can be seen as an extension of poststructuralist insights into all areas of social life. Jean-François Lyotard (1984), perhaps the premier postmodern theorist, regards postmodernism as a “condition” of knowledge in postindustrial societies in which the standard rules of science, literature, and the arts have been radically altered. Jean Baudrillard (1983) associates postmodernism with the advent of a “hyperreal” society, a society defined by new technologies
which permit the seemingly endless replication and reproduction of objects and images. Frederic Jameson (1984) links postmodernism to the economic, describing it as the “cultural logic of Late Capitalism.” Jürgen Habermas (1981) views it as a dangerous rejection of reason and rationality that fails to recognize the positive aspects of modernity, which he regards as an “unfinished project.”

In archaeology, poststructuralism is intimately associated with the emergence of postprocessual archaeologies. Postprocessualism refers to a group of loosely allied approaches that have been termed, at different times, contextual archaeology (Barrett 1987; Hodder 1982b, 1987a), critical archaeology (Leone et al. 1987, Shanks and Tilley 1987a), engendered archaeology (Gero and Conkey 1991; Gilchrist 1999), indigenous archaeology (Watkins 2000, Smith and Wobst 2005), interpretive archaeology (Hodder 1991; Hodder et al. 1995, Tilley 1993; Thomas 2000), and social archaeology (Meskell and Preucel 2004; Meskell et al. 2001). Although these approaches selectively adopt different aspects of poststructuralism, most share a common dissatisfaction with the scientistic approach of much of processual archaeology, particularly its focus on positivism and general laws of human behavior. In its place, they adopt hermeneutic methods and emphasize the social salience of ideology and power by means of such categories as class, gender, and ethnicity (Meskell 1999; Miller and Tilley 1984). Tilley (1989a:185) has heralded this development and not the rise of the new archaeology as the true paradigm shift.

Some archaeologists have attempted to equate processualism with modernism and postprocessualism with postmodernism (e.g., Bintliff 1991, 1993). This broad-brush characterization, while not entirely wrong, does not acknowledge the differences between modernism as a social movement and modernity, as a temporal period, nor does it fully capture the nuanced approaches in current usage (Hodder 1989b; Preucel 1995; Thomas 2004; Thomas and Tilley 1992). As an empirical social science which privileges material culture, archaeology retains a strong modernist core and resists full colonization by poststructuralism and postmodernism. Significantly, this core is skeptical of the relativism and ambiguity favored by some postprocessualists and is committed to a positive role for archaeology in contemporary society (cf. Fowler 1987; Tilley 1989b). In the following section, I review the discourse associated with postprocessual archaeologies and then discuss some key theoretical issues related to the interpretation of material culture.

A Brief History of Postprocessual Archaeologies

Poststructuralism is a product of the rapid modernization of France following World War II and the social unrest linked to the workers’ rights movement and
student protests (Best and Kellner 1991). At this time, Marxism, existentialism, and phenomenology dominated the intellectual scene (Descombes 1980; Poster 1975). In May of 1968, Renault auto workers and university students took to the streets of Paris calling for a “people’s government” (Belsey 2002). Young scholars in the academy regarded the standard theories as totalitarian and oppressive and introduced poststructuralism and Lacanian psychoanalysis as a remedy. These theories incorporated new concepts of language, subjectivity, and identity (Coward and Ellis 1977; Frank 1989; Jameson 1972). In the 1970s and 1980s, this movement spread to the United States and Britain. These countries were particularly receptive because of the resonance with their own social issues, such as the Civil Rights, gay liberation, and women’s movements, which challenged the dominant homogeneous understandings of cultures and the possibility of universalized experiences.

Surprisingly, poststructuralism had almost no impact on French archaeology. Indeed Cleuziou et al. (1991:97) have characterized French archaeology in the 1960s as being atheoretical and an “intellectual desert.” This was precisely the time when French thought was experiencing one of its most intellectually vibrant periods. Even the structuralist, André Leroi-Gourhan, showed little interest in developing general theory. Cleuziou et al. (1991:106) write that in the 1970s Leroi-Gourhan “increasingly refused to take a broad sweep of focus.” One likely explanation for this avoidance of theory is the strong French empiricist tradition. French archaeologists were skeptical of deep structures and the claims of cognitive universals articulated by Lévi-Strauss.

It is ironic then that poststructuralism received its fullest expression in the United States and Britain with the emergence of critical and postprocessual archaeologies. In the United States, Mark Leone articulated a critique of processual archaeology from the perspective of structural Marxism. Leone was an early advocate of the new archaeology. In fact, he edited an influential reader, which presented contributions by many of the leaders of the field (Leone 1972). While teaching at Princeton, he began to question the limitations of the processual program and explore the application of structural Marxism and critical theory in archaeology. In 1977, he conducted an analysis of the interrelations of ideology and architecture at the New Mormon temple in Washington, DC (Leone 1977). A year later, he published a piece on archaeology and time which explored how ideologies of time are constructed and how archaeologists unconsciously use these in their work (Leone 1978).

Leone’s later work expanded to address the relation of different publics to the archaeology of capitalism (e.g., Leone 1984; Leone and Potter 1988). This work derives from over a decade of work by Leone and his associates at Historic Annapolis. Their aim was to do archaeology literally under the eyes of the public and
in the process raise questions about how archaeology is related to everyday life (Leone et al. 1987; Potter 1994). In the process of conducting site tours, the directors realized that most tourists had only a fragmented picture of the history of Annapolis. This was due in part to a series of disconnected oppositions— eighteenth versus nineteenth century, white versus black, historic district versus naval academy, residents versus tourists. This led them to explore how these histories were connected through the class structure of Annapolis society. It also generated a collaborative project with the local African-American community to explore African-American hidden histories (Leone et al. 1995) as well as studies of historical consciousness (Potter 1994) and consumer behavior (Shackel 1993).

Leone’s work converged with a growing interest in structural Marxism in Britain (Miller and Tilley 1984) and inspired a series of studies of class and ideology as well as hegemony. Parker Pearson (1982), for example, examined the interrelation of class and ethnicity as expressed in spatial differences in cemeteries in Cambridge, England. In the United States, McGuire (1988) has performed a similar study of the relations between ideology, death, and capitalism in the Memorial Park cemetery in Broome County, New York. At the same time, several scholars drew from Eric Wolf’s (1982) capitalist expansion thesis to address issues of political economy and ideology (Crumley and Marquart 1987; Leone and Potter 1988; McGuire and Paynter 1991), slavery (Ferguson 1992; Singleton 1985), and colonialism and resistance (Miller et al. 1989; Rowlands 1989).

The archaeology of capitalism has now differentiated into several subfields and research topics, and some practitioners have adopted a critical theory perspective while others have not (Johnson 1993, 1996; Leone and Potter 1999; Wilkie and Bartoy 2000). One area of interest is the archaeology of race (Epperson 1990, 1999; Orser 1988, 2001, 2004). If, as Orser (2004:6) argues, racialization became the dominant practice of cultural distinction during the transition from the medieval to modern world, then archaeology should play a seminal role in explicating this practice. Yet another topic is the archaeology of diaspora (Agorsah 1996; Singleton and Bograd 1995). This topic brings together issues such as family, gender, race, and minority communities and is enmeshed with issues of cultural interaction and transformation, economic exchanges and transfers, power relations, and heritage development. The overall trend is for single issue approaches to be displaced by multifaceted explanations involving the intersections of multiple categories of difference (Delle et al. 2000; Epperson 1999; Mullins 1999).

In Britain, Ian Hodder initiated an independent critique of processual archaeology. Like Leone, Hodder was an early advocate of the new archaeology. He was particularly interested in the spatial organization of human behavior. With Clive Orton, he published an important synthesis of the methods and theories of spatial analysis (Hodder and Orton 1976). He also edited a volume on the spatial
organization of culture (Hodder 1978a). And like Binford, Hodder took up ethnoarchaeology to study the relationship between material culture patterns and behavior. However, unlike Binford, he drew the conclusion that social boundaries were dynamic and fluid, always in the process of negotiation (Hodder 1979, 1982c). Consequently, he interpreted material culture as actively constituting social action and not merely passively reflecting it.

In his introduction to *Symbolic and Structural Archaeology*, Hodder advocated a “contextual or cultural archaeology” that takes a historical perspective since “only by accepting the historical and cultural nature of their data can archaeologists contribute to the generalizing study of anthropology” (Hodder 1982b:13). In 1984, he introduced the term “postprocessual” alongside contextual to describe an archaeology which takes greater account of meaning, the individual, culture, and history (Hodder 1984). In his book *Reading the Past*, he extended the term postprocessual to encompass a variety of alternatives to processualism including neo-Marxist, indigenous, and feminist perspectives (Hodder 1986b).

Hodder and his students provided additional case studies designed to illustrate the potential of the contextual approach. In *Archaeology of Contextual Meanings* (Hodder 1987a), they addressed the problem of interpreting past meanings. In *Archaeology as Long-Term History* (Hodder 1987c), they examined time as one aspect of contextual analysis. Hodder (1987b:1) identified three kinds of meaning – how the object is used (functional meaning), the place of the object within a cultural code (structural meaning), and the historical content of the object itself (historical meaning). For him, contextual archaeology properly includes all three kinds of meanings.

In 1987, Michael Shanks and Christopher Tilley, two of Hodder’s students, coauthored two provocative books on archaeological theory and practice. In *Reconstructing Archaeology*, they defined archaeology as the active mediation between past and present grounded in understanding, critique, and value commitment (Shanks and Tilley 1987a). According to this view, understanding refers to a consideration of how material culture works in the social construction of reality. Critique involves the recognition of the indeterminacy of archaeological knowledge and the exploration of the uses of the archaeological project in the present. Value commitment describes the abandonment of the standard notion of objectivity in favor of the view that knowledge production is always constrained by local conditions and contexts. In *Social Theory and Archaeology*, they provided a broad critique of processualism grounded in contemporary developments in philosophy, history, and sociology (Shanks and Tilley 1987b). These two books, termed by Kristiansen (1988) “the black and the red” because of the color of their covers, stimulated a strong reaction, in part because of their polemic style and their overt embrace of a political role for archaeology.
Not surprisingly, processualists immediately challenged the postprocessual agenda. Binford, for example, singled out what he saw as postprocessualism’s inappropriate use of philosophy. In his Huxley Memorial lecture, he argues that much contemporary archaeological theorizing was dominated by “posturing and polemics” and that this stemmed from a poor understanding of the philosophical issues involved (Binford 1987:39). Taking his cue from the logical positivists, he claims that some of the issues were metaphysical and thus not subject to scientific debate. He cites Hodder’s claim that the ideology of science is linked to strategies of social dominance as an example of “truth as rendered up by socio-political moralizing” (Binford 1987:402). This reaction and language is in fact quite consistent with positivist responses to the sociology of science research in general.

The philosopher Richard Watson, who had played an auxiliary role in the establishment of the new archaeology (see Watson 1972, 1976), mounted an even sharper critique against Shanks and Tilley. In an essay entitled “Ozymandius, King of Kings,” Watson (1990) attacks them for their logical inconsistencies and their seeming defense of relativism. His strategy is to quote extensively from their texts and then deconstruct their arguments. When their approach seems to approximate a position he favors, for example scientific realism, he provides a closer reading to uncover their error, in this case, constructivism. While there are many problems with Shanks and Tilley’s work (which they themselves acknowledge), this particular critique is compromised by its unwavering commitment to positivism (see Wylie 1992b for a more compelling critique).

Some processualists, however, drew positive lessons from the postprocessualist critiques. In his distinguished lecture to the American Anthropological Association in 1989, Charles Redman (1991) offered a defense of the new archaeology while acknowledging the contributions of postprocessualism. Although skeptical that postprocessual approaches would replace processual ones, he identifies several continuities. For example, he shows that they shared a common interest in self-reflexivity, contextual interpretation, and the subject/object dialectic (albeit differently contoured). But, he also challenges what he considered the extremes of postprocessualism, namely its attack on objectivity and the lack of attention to validation. He concludes that the debate should not really be seen as a conflict and that the best solution is mutual coexistence where each approach is respected as an alternative system of knowing.

Similarly, Colin Renfrew’s (1994a) cognitive archaeology (see Chapter 7) adopts certain insights from postprocessual archaeologies. Among the main tenets of his approach are an interest in the cognitive and symbolic aspects of early societies, the recognition of the active role of ideology, the acknowledgment of the constitutive potential of material culture, and an acceptance of internal conflict as a significant force in culture change. In terms of epistemology, cognitive archaeology seeks to
revitalize historical explanation by adopting a modified form of positivism. Each of 
these issues had been raised previously by postprocessualists (e.g., Hodder 1982b, 
1986b).

Within postprocessualism, several internal debates have emerged. John Barrett 
(1987), for example, has critiqued Hodder for placing the individual at the center 
of his historical approach. In a review of Hodder’s (1984) interpretation of the 
European Neolithic, he points out that Hodder’s discovery that “tombs signified 
houses” has no clear status. Was this meaning held by all within the society? How 
was it maintained over a millennium? For Barrett, postprocessual archaeology 
should focus not on individuals, but rather on the historical conditions within 
which particular codes were maintained. He does not feel it necessary to identify 
ideas in people’s minds to understand past social practices. But there is a danger 
here in constituting social practices outside a social framework. It is not possible 
to avoid meanings by focusing on practices, since practices themselves are a form 
of meaning.

Bjørnar Olsen (1989) has raised the issue of power and the academy in his cri-
tique of Shanks and Tilley. He questions their lack of self-reflection and failure 
to analyze the impact of their writing styles on contemporary archaeological dis-
course. He points out that by publishing with Cambridge University Press, their 
book serves to reproduce the existing structures of metropolises and satellites in 
global academic discourse (see Olsen 1991). Shanks and Tilley (1989) responded 
by turning his critique back against him, saying that his own writing is equally 
suspect on these same grounds and that his articles in Norwegian are inaccessible 
to other scholars. This response, however, is less than satisfactory since it sidesteps 
Olsen’s main argument, which insists on an acknowledgement of power relations 
in the production of archaeological knowledge.

Postprocessual archaeology, and to some degree archaeology more generally, 
is reorienting itself around issues of social identity (Meskell 2001). Several new 
directions, including feminism, gender, the body, and sexuality, are now being 
explored. The first widely read feminist piece in Anglo-American archaeology was 
published by Margaret Conkey and Janet Spector in 1984 (Conkey and Spector 
1984). This review article is essentially a “call to arms,” attempting to introduce 
gender as a legitimate topic of archaeological research and to draw attention to the 
status of women in the profession. Contemporaneous with this was Joan Gero’s 
(1983, 1985) work on how Western ideological construction of womanhood affects 
research and funding opportunities for women in archaeology and in the sciences. 
Her results point to clear discrepancies in the funding of male and female scholars 
by the National Science Foundation. In 1988, Gero and Conkey organized the 
Wedge Conference as the first group effort to explore different approaches to 
women and production in prehistory (Gero and Conkey 1991; Wylie 1992a).
A number of feminists have critiqued the writing of archaeology, arguing that it is not neutral, but rather embodies an androcentric perspective. The sterile prose of science writing is complicit in the process of creating hierarchy and excluding women and other non-privileged groups. They also note that reducing people to systems that passively adapt to changes in the environment effectively dehumanizes the past. The issue of representation is seen as crucial since it is in modes of representation that dominating and excluding visions are hidden. In response, some feminists are exploring alternative ways of writing that allow for the possibility of empathy and the recreation of lived experiences (Joyce 1994; Spector 1991, 1993; Tringham 1991). Although similar points have been made about writing in general (e.g., Baker and Thomas 1990; Tilley 1989a), the feminist critique is extending this debate in new directions.

Related to this is the archaeology of the body (Joyce 2005; Meskell 1999; Rautman 2000). Some scholars, influenced by Foucault, conceive bodies and identities as being constructed through various disciplines and discourses (Yates 1993). These approaches were followed by more contextual readings of embodiment influenced by feminist and phenomenological approaches (Joyce 1998; Meskell 1999). Identity and experiences are now perceived as being deeply intertwined and grounded in the materiality of the body. An example of an archaeology of the body is Treherne’s (1995) study of the appearance of toilet articles at a particular horizon in the European Bronze Age. He argues for a changing aesthetic of the body and of personhood as part of broad social changes. Another example is Joyce’s (1998) analysis of figurines from prehispanic Central American. She shows how the Olmec and Maya entextualized specific bodily postures from the range of daily bodily movements and gave them a durability by using materials such as fired clay and stone. This discourse reinforced and naturalized a particular social philosophy about warriorhood, youth, and beauty. Other related areas of interest converge around subjectivity, selfhood, agency, emotion, and memory (Tarlow 1999; Van Dyke and Alcock 2003).

Postprocessualists have also responded to contemporary historical, literary, and anthropological studies of sexuality. Inspired by the work of Foucault, Laqueur, and Butler, many have argued that there are no simple dichotomies between sex and gender (Meskell 1999; Schmidt and Voss 2000). Sexuality is not a stable category, but rather a set of discursive practices that together define what is culturally appropriate. Moreover, these discourses change over time. Voss and Schmidt (2000) have examined some of the social factors hindering the development of an archaeology of sexuality. They observe that most archaeologists have not addressed sexuality because of the perception that it is outside the purview of the profession. This is due to such impediments as “sex essentialism” which holds that sex is a natural force that somehow preexists social life, “sex negativity” which assumes that eroticism is
deviant, and “sex hierarchies” which privilege only those sex acts within the family and associated with procreation. They then argue that sexuality is in principle no different from other social concepts such as gender, ethnicity, and religion, all of which have been successfully investigated by the profession.

Postprocessualists have also contributed to a humanist landscape archaeology (Ashmore and Knapp 1999; Ucko and Layton 1999). They have pioneered the shift from landscape-as-passive to landscape-as-active, first explored in human geography (Cosgrove 1984; Tuan 1977). The concern here is with how people experience the world around them, how they move through monuments, settlements, and processional ways organized according to social and cosmological schemes (Bender 1992; Edmunds 1993; Tilley 1994). Christopher Gosden (1989), for example, has emphasized the sociality of landscape. He argues that the ways in which social groups interact with landscapes are partly structured by how previous social groups interacted with the landscape. The social landscape is thus both context and content. A similar point is made by Christopher Tilley (1994:23) who proposed, following Anthony Giddens, that landscape is both the medium for and the outcome of action and the previous histories of action. He regards landscape as having ontological import since it is lived and replete with meanings and symbolism, not simply something just looked at or thought about. This means, as Bender (1993a, 1998) points out, that there is never a single landscape to be identified and interpreted; there are always multiple landscapes.

Many recent landscape studies entail the study of myth and memory. Paul Taçon (1999) has discussed the antiquity of landscape as a mythological charter and moral order in aboriginal Australia, one that is reproduced in contemporary aboriginal art. The landscape itself is defined by different levels of sacredness. As people acquire different knowledge bases through initiation, they receive the rights to access more varied sacred sites and landscapes. Tim Pauketat and Susan Alt (2003) focus on what they call “mound memory,” namely, how mound construction knowledge was transmitted across generational and cultural divides. They hold that the persistence of four-sided platform mound construction can be interpreted as the inscription of social memory in landscapes. Archaeologists are thus poised to examine both the material and immaterial registers of memorialization through the study of remembering and forgetting in diverse cultural moments.

The archaeology of agency has also emerged as a significant discourse (Dobres and Robb 2000). It is a reaction to the narrow processual focus on functionalism and adaptationalism. At the same time, it is an engagement with theories of practice (see below) and an attempt to reassert the individual into social explanations. There is currently a broad range of perspectives on agency. For example, John Barrett (1994) emphasizes the social context of action. Following Giddens, he
argues that the actor is situated with respect to the power/knowledge system which provides the knowledge and resources to act. He applies these insights to the study of the mobilization of space and resources in prehistoric monuments in Britain. Johnson (2000) proposes that agency needs to be understood in terms of how individuality is constructed through such structures as capitalism, the nation-state, and the colonial Other. Hodder (2000) suggests that the study of agency must acknowledge intentionality and the uncertainties of daily life and applies this approach to the study of the Ice Man and Catalhöyük.

It is now widely accepted that archaeology and anthropology are products of the colonialist enterprise. One product of this recognition is the recent emergence of postcolonial archaeology (Gosden 2001, 2004; Gosden and Knowles 2001; Shepherd 2002; Wilcox 2002). Indeed, Gosden (2001:241) asserts that with the end of empires and their hegemonic forms of domination “all archaeology today is postcolonial.” There are now several studies of the relationships between archaeology and colonialist practices. McNiven and Russell (2005), for example, examine in detail how Western portrayals of indigenous peoples have furthered colonialist agendas in settler countries such as Australia, Africa, Canada, India, and the Americas. In addition, indigenous peoples are increasingly gaining a voice in the control of their ancestral remains, sacred lands, and material culture (Fforde et al. 2002; Layton 1989a,b). There is now a movement toward an indigenous archaeology that proposes alternative categories and methodologies (Atalay 2006; Nicholas and Andrews 1997; Smith and Wobst 2005). In the United States, this has largely come about within the context of the Native American Graves Protection and Repatriation Act (NAGPRA) passed into law in 1990 (Watkins 2000). This law provides a legal mechanism for federally recognized Indian tribes, Native Alaskan corporations, and Native Hawaiian organizations to make claims for human remains and certain categories of objects held by museums and other institutions that receive federal funding.

From Structure to Practice

For postprocessual archaeologists, the primary deficiency of structuralism was its lack of a theory of practice. Hodder (1982b:8), for example, critiqued both Saussurian and Lévi-Straussian versions of structuralism for their inability to explain particular historical contexts and the meaningful actions of individuals. He and his students, therefore, embraced Bourdieu’s theory of practice and Giddens’s structuration theory. Both of these perspectives, ultimately derived from Marx’s notion of praxis, seek to overcome the classic oppositions of the individual and society, objectivism and subjectivism.
Pierre Bourdieu's (1977, 1984) theory of practice is based upon a critique of the objectivism of standard structuralist approaches. Objectivism refers to the analysis of objective relations, such as economic or linguistic, which structure practice and representations of practice (Bourdieu 1977:3). This approach presumes a break with primary knowledge of the real world. He notes that Saussure constructs linguistics as a science by treating language as an autonomous object. Practices are regarded as symbolic facts to be deciphered with reference to a cultural code. Similarly, he suggests that Lévi-Strauss’s use of the idea of the unconsciousness neglects to address how cultural norms arise. He concludes that

(by) failing to construct practice other than negatively, objectivism is condemned either to ignore the whole question of the principle underlying the production of the regularities which it then contents itself with recording: or to reify abstractions, by the fallacy of treating the objects constructed by science, whether ‘culture,’ ‘structures,’ or ‘modes of production,’ as realities endowed with a social efficacy, capable of acting as agents responsible for historical actions or as a power capable of constraining practices; or to save appearances by means of concepts as ambiguous as the notions of the rule or the unconscious, which make it possible to avoid choosing between incompatible theories of practice (Bourdieu 1977:27).

Bourdieu’s theory of practice is thus an attempt to transcend methodological objectivism. At the core of his approach is the notion of habitus which mediates both structure and practice (Figure 6.1). He defines habitus as “the durably installed generative principle of regulated improvisations” (Bourdieu 1977:78). He proposes that practices cannot be deduced from the social conditions underlying their production. Rather, they can only be understood by being related to the objective structure defining those conditions and the particular state of that structure. For Bourdieu, habitus is naturalized history as it is reproduced through practice. The unconscious is, therefore, nothing more than the forgetting of history, which is a condition that history itself produces.

Anthony Giddens (1979, 1984) developed his structuration theory as a critique of both functionalism and structuralism. His central concern is to salvage the notion of the competent and knowledgeable actor without lapsing into a subjectivist view. For him, this is accomplished through a consideration of recursive social practices. He writes,

The basic domain of study of the social sciences, according to the theory of structuration, is neither the experience of the individual actor, nor the existence of any form of social totality, but social practices ordered across space and time. Human social activities, like some self-reproducing items in nature, are recursive. That is to say, they are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors. In and through
their activities agents reproduce the conditions that make these activities possible (Giddens 1984:2).

The fundamental postulate of his theory is the duality of structure, the idea that structure is both the medium and outcome of the practices that constitute the social system. This “duality of structure” connects the production of social interaction in particular instances to the reproduction of social systems across time-space. He further argues that power is integral to the study of social life by virtue of the connection between human action and its transformative potential. He suggests that power can be analyzed as relations of autonomy and dependence between actors as they draw upon and reproduce structural properties of domination.

Giddens (1984:28) develops a model of the modalities of structuration that describes the duality of structure in interaction (Figure 6.2). Here he identifies three aspects of structure – signification, domination, and legitimation – and three aspects of interaction – communication, power, and sanction. Mediating the relationship between these levels are three modes of structuration – interpretive schemes, facility, and norms. For example, interpretive schemes are modes of typification that are part of the actor’s stock of knowledge that give meaning to the world and are applied reflexively to sustain communication. He suggests that
actors draw upon different modes of structuration in the reproduction of systems of interaction and, in the process, reconstitute their structural properties.

Mary Braithwaite’s (1982) ethnoarchaeological study of decoration among the Azande in southern Sudan is an example of the integration of these two perspectives. She argues that the meaning of semiotic elements is established by their actualization in social life and, following Bourdieu, that symbolic systems owe their coherence to the fact that they are the product of practices that instantiate principles that are not only coherent, but practical. Symbols thus have the capacity not only to communicate, but also to guide and effect action. In Giddens’s terms, symbol systems are both the medium and outcome of social action.

Her analyses reveal that decoration functions as a symbolic marker in contexts of social ambiguity. The preparation and consumption of food is an extremely important part of Azande social life and it entails the transformation of raw to cooked. A general rule in Azande society is that it is disrespectful to give a high status guest raw food as a gift or in a meal, although it may be given to people of lower status. The Azande “mark out and authorize” the transformation between raw and cooked, by decorating the pots used in these activities. She contrasts this to the use of the men’s undecorated water pot. This kind of pot is only used in private and thus there is no need to decorate it since there is no social ambiguity.

She then poses the question of why there is no consciousness of this meaning of ceramic decoration in Azande society. Her answer takes the form of an analysis of the male circumcision ritual. She shows that a boy’s initial socialization into Azande life is dominated by women. The circumcision ritual not only marks the passage from boy to man, but also the transition from the world of women to the world of men, and this involves emphasizing the secondary power of women and legitimizing their inferior status as a dominant ideology. She concludes that decoration facilitates encounters between opposed categories, especially those that are not explicitly acknowledged.
Another example is Tim Yates’s (1989) study of social space among the Saami of Norway from 1700–1900. He interprets Bourdieu’s notion of *habitus* as a “deep-structure” which serves as a set of durable, transposable dispositions and functions as the generative basis for social practices. These structures are culturally specific, rather than universal as proposed by classic structuralism, and are historically constituted through the duality of structure, interpreted, in Giddens’s sense, as both the medium and outcome of human action, and the dialectical interplay between deep and visible structures.

Yates analyzes the major historical texts on the Saami to identify the divisions of household space within the *kahte* (tent houses). He records three main areas subdivided to create nine separate zones, each of which have their own names. He then identifies a set of oppositions between male/female, sacred/profane, clean/unclean, death/life, back/front, hunting/milking, hunting blood/menstrual blood, north/south, and winter/summer, all of which are linked to spatial boundaries and gender relations. For example, women are required to store their clothing within their prescribed area of the *kahte* just as men are required to store their hunting and fishing equipment within their area.

Yates interprets the meaning of the social division of space within the *kahte* as a structural transformation of the ritual divisions of the heavens (Figure 6.3). In daily life, the main doorway through which women could pass was opposed to the back door through which they could not, because menstrual blood and ritual impurity were opposed to blood of the hunt and sacrifice. This can be seen as a transformation of the three levels of heaven. At the highest level of heaven, the male storm god (associated with the back of the *kahte*) is opposed to the sun god (associated with the front). At the lower level, the ruling father (back) who receives the souls of the deceased is opposed to the ruling mother (front) who protects the household. At the terrestrial level, there are three divisions with the hunt goddess (back) opposed to the door goddess (front) and the hearth goddess in the center. The *kahte* thus physically embodies the twin domains of life and death and thus orders the relations of men and women. Yates concludes that social practices, such as the making of sacrifices at the back of the *kahte*, thus reproduce the Saami ideology of gender.

Reading Material Culture

Almost from the beginning, postprocessualists questioned the use of language as the appropriate model for interpreting material culture. Hodder (1982b) observed that, unlike spoken language, material culture meanings can be nondiscursive and implicit. Moreover, material symbols are not arbitrary like words since the content of the sign affects the structure of its use. Miller (1982) wondered whether
such linguistic concepts as syntax, semantics, and pragmatics were plausible in the study of material forms. This is because while the rules of structural generation are subject to generalization, the specific results of productive activity are not. Wylie (1982) suggested that material culture does not produce “meaning effects” in the sense of conveying specific messages of states of mind similar to sentences or speech acts. For her, the linguistic analogy holds primarily on the level of the encoding process and meanings and a mediating competence may govern the structuring of non-linguistic items.

Hodder (1987b) extended his critique by suggesting that semiotic approaches are incapable of dealing with contextual meanings. This follows because they depend upon an arbitrary relationship between the signifier and signified and neglect the associated meanings of the signified. He writes,

(t)hus a pot may be the signifier of a concept, such as “young man,” which is the signified. It is important to recognize that in most semiotic analysis the relationship

Figure 6.3 The mutuality of ritual and social maps of the Saami *kahte* (after Yates 1989:Figure 20.4).
between the signifier and the signified is seen as arbitrary. The concern is with the organization of signifier and signified, rather than with the particular content of the concept “young man” and how it might appropriately be referred to by the pot and its associated meanings. Also the whole analysis remains abstracted from the reality of “a young man” (Hodder 1987b:2).

Hodder concludes that most semiotic analyses provide an inadequate base for understanding both meaning content and the relationships between signs and the world of material action. This is because they focus on complex signs and neglect simpler ones. He, therefore, identifies five different kinds of signs as being useful in the reading of material culture meanings (Hodder 1987b:2–3). Three of these – indices, signals, and icons – are simple forms, while two others – symbol and metaphor – are complex forms. He defines an index as a sign where the signifier is contiguous with the signified. A sherd is an index of a pot and a group of pots may be indexes of the clay from which they are made. He defines a signal as a sign that triggers mechanically or conventionally some action on the part of the receiver. Signals include such things as traffic lights which facilitate the orderly flow of traffic. Icons are signs that signify by virtue of a property that is shared with what they represent. He gives an example of prehistoric rock art and the animals they depict. Symbols are signs with an arbitrary relationship between signified and signifier. Metaphors are signs where there is a discrepancy between what a particular sign refers to and the capacity of the sign to denote. For example, the word “milky” can be used as a metaphor for water, but it retains the connotations of milk.

Hodder notes that any particular sign can be a signal, icon, or symbol, so these signs actually refer to different types of representation. He observes that these sign types occur with different frequencies in language and in material culture. While all signs are important and used in both contexts, simpler signs are extremely common in material culture while more complex signs are common in language. He concludes that “it is for this reason at least, that archaeology, as a discipline particularly devoted to the ‘reading’ of material culture, needs to be involved in the debate about semiotic analysis” (Hodder 1987a:3).

Shanks and Tilley have also critiqued the linguistic model. For them, material culture is a coded sign system that constitutes “its own material language” in the context of production and consumption (Shanks and Tilley 1987b:101). It does not simply reflect the signification structures of language in another form. Rather, it is “constituted in terms of a spiraling matrix of associative and syntagmatic relations involving parallelism, opposition, linearity, equivalence and inversion between its elements” (Shanks and Tilley 1987b:103). Material culture is thus implicated in a material discourse that is bound up with social practices involving power, sectarian interests, and ideology.
Elsewhere, they define material culture as the “objectification of social being” (Shanks and Tilley 1987a:130). Here they use the term objectification to refer to the transformation of matter into a cultural object by means of social labor. They write that “every act of social production is always one involving an interconnection between inert materiality, consciousness, action, and thought” (Shanks and Tilley 1987a:131). They note that material culture is simultaneously simpler and it is more complex than written or spoken language. It is simpler in the sense that the syntactic linkages are more explicit and fewer in number and it is more complex in that it is polyvalent and multidimensional (Shanks and Tilley 1987a:133). Material culture as a sign system takes on an ideological dimension when it is implicated in social strategies. For them, a materialist theory of material culture must analyze the ways in which actors produce fixed relations of meaning in a symbolic field.

In later publications, Hodder (1988, 1989a, 1989c, 1994) has considered in more detail some of the ways in which the language model is flawed in the study of material culture. He suggests that this is because in language the relationship between the signifier and signified is conventional, while, in the case of material culture, the use of a particular symbol is not arbitrary. As he puts it, “the material world seems to impinge on the conceptual categories” (Hodder 1989a:257). Significantly, he cites Peirce’s iconic and indexical signs as examples of motivated signs. The implication is that material culture meanings appear to violate Saussure’s arbitrary principle of language. In addition, he identifies three points of divergence with the language model (Hodder 1989b:73). These include the non-discursive and subconscious nature of material culture meanings, their polyvalent, polysemic, and ambiguous character and their durability, unlike the ephemerality of the spoken word.

Material Culture and Text

Poststructuralism is often associated with the move from language to text. This move is largely due to Jacques Derrida (1976, 1978) and his deconstruction approach which emphasizes the transgressive activities of reading and writing. It is also associated with Paul Ricoeur (1971, 1974, 1976) who proposed his influential social-action-as-text approach in the context of his discourse-oriented approach to culture. Together, these perspectives transformed literary theory from an esoteric enterprise to a critical social practice (Norris 1982). Postprocessual archaeologists have drawn from both of these developments to retheorize the interpretation of material culture.

Derrida’s (1976) critique of structuralism is based upon the “metaphysics of presence.” This is the view that the center of philosophy is the search for foundational knowledge which presupposed an unmediated access to reality. Derrida
argued that this approach is compromised, however, by the very binary oppositions it uses to guarantee truth. In all cases, the oppositions establish a hierarchy of values where one half of the opposition is valued positively and the other negatively. For example, reality is valued over appearance, speech over writing, men over women, and reason over nature. Derrida went on to identify these problems in Levi-Strauss’s structural analyses of myth and ritual. For example, Levi-Strauss regarded the introduction of writing among the Nambikwara as an instrument of oppression and a tool of colonialism. Derrida saw the theme of lost innocence as a romantic illusion and linked to the nostalgic craving for origins and presence.

Derrida introduced the term *différance* as neologism whose meaning shifts between two French words meaning difference and deferral. It is derived from a reinterpretation of Saussure’s central tenet that “in language there are only differences, and no positive terms” (Derrida 1976:166). As Norris (1990:205) writes, it thus brings together the Saussurian claim that language is a structure of difference with the Husserlian claim that the present is endlessly deferred through the non-self-identical nature of existence. It is a term that embraces the idea that meaning is radically indeterminant due to endless intertextuality. For Derrida (1976:158), there is “nothing outside of the text.”

Ricoeur’s (1971, 1974, 1976) critique of structuralism is based upon the centrality of discourse. He distinguished discourse from language on four grounds. First, a language system as conceived by structuralists is simply virtual and hence timeless, but discourse always occurs at some particular moment of time. Second, a language system is self-contained, but discourse always refers to persons who speak, hear, read, and write. Third, though a language system is a necessary condition for communication inasmuch as it provides the codes for communication, it itself does not communicate. Only discourse communicates among interlocutors. And fourth, the signs in a language system refer only to other signs in it, but discourse refers to a world that it seeks to represent.

To clarify the analogy between discourse and action, Ricoeur (1971) draws an analogy with speech act theory. He suggests that social action has the structure of a “locutionary” act inasmuch as it has a propositional content. He also suggests that action has “illocutionary” characteristics that closely resemble the speech acts in discourse. Each type of action has constitutive “rules,” rules that make an action a specific type of action. An obvious example of the “illocutionary” character of actions is that of promises since the giving of a promise is itself a social act.

Hodder introduced the text analogy to archaeology in two steps. The first step involves considering the archaeological record as a “text to be read” in a more or less conventional sense. Hodder (1986b) proposes this idea in his book *Reading the Past*. Here he suggests that the idea of material culture as a text has long been
tacitly assumed in archaeology. This is evidenced by the fact that archaeologists
often refer to their data as a record or as a language. For him, “the importance of
such an analogy increases when the concern is to discover the meaning content
of past behaviour” (Hodder 1986b:122). He notes that the text analogy means “in
association” or “in context.” Artifacts are silent only when they are “out of their
texts.” That is to say, the network of relations between the artifact, its discovery
locus, and other artifacts and features constitutes the essential field by which
meaning can be read. The important insight here is the structuralist view that
meaning is a relational quality and not a transcendental one that inheres in the
artifact through all time and space.

The second step is Hodder’s engagement with Paul Ricoeur’s work. Hodder
argues that human action can be conceived as having the properties of dis-
course and text. He writes, “any material action, such as the forming of a pot
or the discarding of an artifact, has a ‘propositional’ content which can be iden-
tified and reidentified as the same” (Hodder 1988:257). He continues with the
poststructuralist insight that meaning is not solely determined by the author or
actor,

(t)hus the event of doing is eclipsed by the significance of what is done. Just as a writ-
ten text becomes divorced from its author, so too an action may have consequences
of its own separate from the intentions of the actor. Text and action are ‘distanced’
in similar ways from the author, actor, or producer. The meanings of the texts and
actions become linked to the intentions and practical contexts of the reader, user, or
viewer (Hodder 1988:257).

For Hodder, the archaeological implications of his textual approach are twofold.
First, it reveals that material culture meanings are continually generated through
practice and that these meanings both structure and constitute thought. Second,
text links symbolic meaning with power and social strategy. This follows because
not everyone in a particular society is authorized to write a text or to give it a
particular meaning.

Christopher Tilley (1991) has advocated the text approach in his book Material
Culture and Text: The Art of Ambiguity. Inspired by Derrida (1976), he begins with
a comparison of material culture and writing and suggests that material culture is
“written” through a practice of differentiation in just the same manner as phonetic
writing. He suggests that “both result in the material fixation of meaning which
by contrast to speech is indirectly communicated in the sense that I decorate a pot
by dividing up the empty space of the clay or write a letter by inscribing marks
on a blank sheet of paper and at some time in the future you read and interpret
the visual medium, able by virtue of the material fixation to read what I have
produced” (Tilley 1991:17). He is quick to say, however, that material culture does
not communicate in the same way as language or the written word, rather it is structured in an analogous fashion. While both are the product of similar materialist practices that involve spacing, differentiation, articulation, and rearticulation, material culture involves a different transformation of those practices.

A number of scholars have now critiqued the textual metaphor. Buchli (1995:183), for example, has observed that there is a confusion in the literature over the meaning of “text.” He writes “(w)hen we say ‘text’ do we mean a semiotic system (de Saussure) or structuralist system (Levi-Strauss), a hermeneutic interpretive system based on structuralism (Gadamer and Ricoeur) or something entirely different” (Buchli 1995:183)? This critique, however, should be seen as a criticism of the broader discourse on text rather than of any specific approach. Parker Pearson (1995:186), for example, is skeptical of the textual metaphor because it denies the opportunity to adequately incorporate notions of agency and structure. Barrett (1994:166) has suggested that the focus on the textual record leads archaeologists to assume an original event, behavior, or meaning, rather than acknowledging our own agency to bring that past into being. Chippindale (1992:254) has argued that the study of artifacts as texts risks ignoring their artifactual character.

Olsen (2003) has recently proposed an approach to the study of material culture that purports to go beyond text. He writes, “although the textual analogy was important and productive, we come to ignore the differences between things and text: that material culture is in the world and plays a fundamentally different constitutive role for our being in this world than texts and language (Olsen 2003:90, his emphasis). He continues to say that things do more than express meanings. As an alternative, he proposes a “symmetrical archaeology,” based upon the work of Bruno Latour (1993, 1999), where all physical entities are conceptualized as beings in the world alongside humans, plants, and animals. This approach would seem to share much with indigenous archaeologies, but Olsen (2003:95) implies that such approaches are fetishistic in that they attribute properties and relations to things that can correctly be attributed only to human beings.

These critiques are largely misguided since it can be argued that textualization is the central constitutive practice within social orders (Silverstein and Urban 1996:1). Having said this, there are certain problems with how some postprocessualists have developed the text analogy. The postprocessual equation of material culture and text mistakes social structure for social practice. Material culture is not simply a collection of signs, motivated or otherwise, to be passively interpreted by a reader. Material culture is an active social practice of engagement with the world. Here Silverstein and Urban’s (1996) critique of the standard model of text is relevant. They suggest that Ricoeur’s and Geertz’s text approaches tend to focus on a single phase in the cultural process, rather than consider the ongoing production of texts. They, therefore, stress the dynamic practices of entextualization and
co(n)textualization. The idea of entextualization refers to the practices of identifying a segment of social action and drawing a boundary around it to emphasize or highlight it. This segment can then be re-embedded by relating it to its context in a practice of contextualization which, in the case of written language, includes cotextualization. Silverstein and Urban conclude that social orders (texts) are thus accretions of discrete and sometimes contradictory social practices (fragments of texts) that are abstracted and reintegrated in the culture process.

Material Metaphors

One development in poststructuralist writing has been a revival of interest in rhetoric. Following the work of Jakobson (1956) and Lakoff and Johnson (1980), metaphor has come to be recognized as a central mode of signification in philosophy and linguistics. Postprocessual archaeologists have contributed to this discourse by exploring how and why certain material objects come to act like metaphors and thus participate in social life. These objects have been termed “material metaphors.” (Bruck 2004, Ray 1987).

The first archaeological use of the term is Keith Ray’s (1987) semiotic study of the Igbo-Ukwu corpus. This is a remarkable group of metal, ivory, and ceramic objects dating to the 11th century and excavated in the 1960s by Thurston Shaw at several sites near Awka in southeastern Nigeria. The objects include bronze staff heads and staff ornaments, knotted copper bars, copper bracelets, bronze pendants, fragments of bronze bells, links from copper chains, elephant tusk horns, and iron gongs. Some of these objects were found in caches from sealed contexts such as disposal pits, filled in cisterns, living floors, and burials.

Ray defines material metaphor as “a representation or group of representations that encapsulates in material form certain kinds of moral or social or ritual relationships, or certain kinds of interaction, by means of either a simple metaphorical or complex proverbial portrayal of objects or creatures” (Ray 1987:67). They are associated with material culture expressions of social codes and conventions. He considers material metaphors to be the counterparts of various categories of verbal discourse. Material metaphors are thus used in conjunction with verbal metaphors to articulate social relationships and interactions.

The most frequent and varied of the animal representations are snakes (Figure 6.4). Ray notes that coiled snakes appear on sculpted mud walls, carved wooden doors, war-drums, wall paintings, and shrine furniture. Their popularity may refer to the Igbo proverb Okilikili bu ije agwo which translates as “circular, circular is the snake’s path” (Ray 1987:72). Snakes occur in the Igbo corpus on staff ornaments and bronze pendants. In this case, they seem to be symbols of key
ritual offices such as the eze Nri, the priest-king of the Umunri, and the Okpala, the chief priest. The snake can be associated with ala, the goddess of the earth and eke, the python. The eze Nri thus occupies a status “between worlds,” mediating the relationships between gods and men.

Ray also draws attention to a second way in which material culture signifies social meanings which he calls “presencing.” Presencing refers to the virtual introduction of individuals or categories into contexts and interactions that they are not directly involved in by means of material culture. Ray develops this concept from Giddens’s (1981) characterization of space–time distanciation in his theory of structuration. He argues that Giddens underestimates the role of material culture in literate and non-literate contexts. He writes, “(i)tems of material culture are in my view habitually used to ‘presence’ people even in literate societies: in non-literate eras it is likely that their place was still more important, and that they were used actively in strategies of social control” (Ray 1987:67).

Ray identifies a third kind of metaphor which he calls “historical metaphor.” This refers to the metaphorical relationship between a people and their beliefs about their history. Ray then suggests that this sign mode is represented in the Igbo-Ukwu corpus in the portrayals of people and especially in ichi facial scarification.

Tilley (1999) has extended Ray’s insights in his book *Metaphor and Material Culture*. Here he articulates a case for considering metaphor as the basis for an interpretative understanding of the world. Following Lakoff (1987) and Johnson (1987), he argues that since cognition is essentially a process of seeing something as something, humans have an innate tendency to think metaphorically. Given that this is the case, the challenge for social scientists is to understand how minds with this propensity come to produce specific metaphorical linkages under historically specific circumstances. Metaphors are not simply representations of the world. Rather, they actively constitute it as they are deployed in speech.

Certain metaphors can be called key metaphors because they condense meaning or alternatively permit a multiplicity of meanings. Among the most potent of these
are the metaphors associated with the human body. Tilley gives as an example the container metaphor. “By conceiving of human bodies as containers (of fluids and substances, with orifices – entrances and exits) one can begin to examine symbolic linkages between the body as container and other types of containers such as baskets or pots” (Tilley 1999:8). The container metaphor thus allows novel associations between different kinds of material culture. He further argues that metaphor can also be conceived as a quality which binds together persons and groups.

Tilley provides an illustration of his approach with an analysis of the metaphorical meanings linked to the construction of canoes on Wala island, Vanuatu. Building from the work of Munn (1977), he begins with a descriptive account of the canoes. These are made from the hollowed-out trunk of the canoe tree (rav) and tend to be approximately 4 m long and 45 cm wide with an outrigger, 2 m long, made of a branch from the same tree. He notes that eight different plants are used in finishing the construction of the canoe. For example, the top of the hull is beautified with different sprouting leaves. The number and variety of these plants is greater than might be expected from a purely functional perspective. Tilley (1999:109) thus concludes that the canoe is a “floating forest” that unites the trees of the forest just as it unites people and their life experiences.

Tilley (1999:112–129) then examines a series of metaphorical transforms of the canoe that relate to the body and various forms of material culture. He notes that the Wala people conceptualize the canoe as a human body where the outrigger is the sole of the foot and palm of the hands, the outrigger booms are the arms and legs, and the outrigger attachments hands and fingers. The canoe itself contains both male and female characteristics, but the former tend to be emphasized. In some cases, it is identified as a “big man” where the bow decoration is considered a moustache and the stern decoration a penis sheath (Figure 6.5). He then suggests that there is a basic relationship between the canoe, the club-house, and the society of men. The canoe can be seen as a floating men’s house which has been turned upside down, just as the club-house can be seen as a canoe which has been inverted. Similarly, there is a close relationship between canoes and slit drums used in dancing. Both are made from the same woods and both have both male and female attributes. He emphasizes that although the metaphorical meanings of the canoe have changed over time, the canoe itself remains a central medium for the social regeneration of community.

Tilley (1999:133–173) provides a prehistoric example of metaphorical meanings in his study of Swedish Bronze Age rock art. His database is the rock art corpus from the site of Högsbyn in Dalsland. Tilley documents the physical setting of the rock art panels and argues that the culturally appropriate way of experiencing them is from the south to the north. He identifies 12 main elements both abstract and representational – cupmarks, circle cross, circle, wavy lines, cross, infilled,
humans, animals, feet, hands, boats, and shoe soles. He identifies 35 depictions of humans on 12 different rock art panels. He interprets these panels to reference the processes by which social and sexual identities are established. He regards the rock art as public statements of the within-group relations and social categories as part of the objectification of self in a ritual discourse.

This study is somewhat less persuasive than the canoe study because of the difficulty in establishing culturally meaningful categories of analysis. For example, one axis of variability not considered is the orientation of the boats, feet, and human figures – whether they are represented as right side up, or upside down. The latter position may metaphorically link to death while the former may signal life. It is even possible that the boats are better considered sleds. Very similar, if not identical, objects are represented in the Nämsforsen rock art corpus surrounded by what appears to be herds of elk or reindeer (Tilley 1991). These images may thus reference reindeer herding, a practice which is known from both ethnographic and modern Swedish accounts (Hyrenius 1969; Laufer 1917).

Summary

From its origins in France to its adoption in the United States and Britain and beyond, poststructuralism has touched almost every academic discipline. It has had its strongest impact in the humanities and social sciences, particularly literary criticism and cultural studies. But it has also influenced the natural sciences where it has contributed to a reconsideration of Newtonian determinism and Cartesian dualism. Poststructuralism embodies a critique of totalizing, essentializing, and foundationalist knowledge expressed by structuralism and other systems approaches. It holds that all knowledge is contingent and constructed through signs, which are themselves linked to other texts through social practices. Since every text exists only in relation to other texts, meaning circulates in discourse creating variable economies of representation.
The relation of poststructuralism to archaeology is complex and nuanced. In many ways, it is responsible for the breadth and variety of postprocessual archaeologies. These approaches include interpretive archaeology, contextual archaeology, feminist archaeology, critical archaeology, postcolonial archaeology, and indigenous archaeology, among others, and they highlight issues of subjectivity, meaning, identity, ideology, and power. All of these approaches have critiqued the limitations of positivism, particularly its reliance upon the subject–object dichotomy and the facts–values distinction. This critique has been so influential that most archaeologists today would agree that archaeological knowledge is theory dependent and has political implications in the world. Many postprocessualists regard Bourdieu’s theory of practice and Gidden’s structuration theory as a productive means of going beyond the limitations of structuralism.

Postprocessualists have also provided some of the most sophisticated analyses of material culture meaning. From the outset, they critiqued the language model of material culture because of the distinctive qualities of material culture. These differences include such things as durability, temporality, and ambiguity. In response to these limitations, Hodder (1986b, 1988, 1989c) proposed the text analogy as an alternative. From this perspective, material culture meanings can be read like a text. However, other postprocessualists, have moved away from the text analogy to emphasize rhetoric and material metaphor as a means of understanding the force of social practices. As valuable as these contributions are, they ultimately fail to consider fully the materiality of meaning and the deployment of things in the cultural mediation of the social order. As Julian Thomas (1995:211) writes, we need to develop an awareness of things as co-present in the world and this requires investigating how they are retained or forgotten as memory, trace, and tradition. One relatively new approach that is exploring the development of a theory of material engagement from a scientific point of view is cognitive archaeology.
The character of past cognition must be largely inferred from the archaeological record. And to draw such inferences archaeologists need to engage with, or rather become participants in, the cognitive sciences – just as Bloch (1991) has recently argued for anthropology. This is essential since we cannot pretend to understand the ancient mind without entering debates concerning the character of the modern mind.

Steven Mithen (1994:29)

Cognitive science is the interdisciplinary study of mind, thought, and intelligence (Luger 1994). It integrates cognitive psychology, artificial intelligence, linguistics, philosophy, neuroscience, logic, robotics, anthropology, and biology into a dynamic research program. Cognitive science has its origins in the late 1940s and developments in information theory (Shannon and Weaver 1949), cybernetics (Wiener 1948), and experimental psychology (Kohler 1947). It became established in the mid-1950s largely due to the work of George Miller (1956) on memory, Herbert Simon (1969) in computer modeling and artificial intelligence, and Noam Chomsky (1957) in linguistics. It was institutionalized in 1979 with the founding of the Cognitive Science Society and the publication of the journal *Cognitive Science*. It is today an extremely influential field in part because it crosses the natural and social sciences.

Cognitive archaeology can be defined as the study of “past ways of thought as inferred from material remains” (Renfrew 1994a:3). Although a case can be made that archaeologists have always been interested in the “thought behind the artifact,” cognitive archaeology as a distinct field is a relatively new development. As an outgrowth of processual archaeology, it currently engages with a range of
related fields including palaeoanthropology, animal ethology, evolutionary psychology, artificial intelligence, neuroscience, and cognitive science (Nowell 2001a; Renfrew 1994a). There is, as yet, no clear theoretical consensus within the field and several different approaches are currently being pursued more or less independently (Wynn 2001). What unites these approaches, then, is their refutation of the standard processualist thesis that the mind is epiphenomenal to an understanding of the past and their methodological commitment to some form of positivism.

There are two broad research areas within cognitive archaeology and these are usually distinguished on temporal grounds (Nowell 2001b; Renfrew 1994a). It is useful therefore to differentiate these as "evolutionary studies" and "cognitive processual studies." The first of these approaches encompasses the origins and evolution of human cognitive abilities. How did consciousness, language, and the use of tools evolve from fossil apes to anatomically modern humans? The second addresses the identification of cognitive processes of past modern peoples and their relationships to general cognitive principles. Here the focus is on the use of material culture and its symbolic role in communication, information processing and storage. Studies of design and planning, measurement, value, the supernatural, and representation fall within this second research area. Significantly, both of these approaches to cognitive archaeology have used semiotics. In this chapter, I provide a historical review of cognitive archaeology and then turn to a discussion of the two main research areas.

**A Brief History of Cognitive Archaeology**

The origins of modern cognitive science are closely linked to the critique of behavioralism and the emergence of experimental psychology. Behavioralism, as espoused by B. F. Skinner (1953) and John B. Watson (1958), is the thesis that animal and human behavior are properly studied through observational and experimental methods. Behavioralists deemed cognition and the mind irrelevant because they are unobservable. This view drew collateral support from the logical positivist’s critique of metaphysics (see Chapter 5). In 1957, Noam Chomsky published his book *Syntactic Structures* and this work almost immediately revolutionized the intellectual climate. Chomsky explicitly rejected the behaviorist assumptions about language as a learned habit and proposed instead to explain language in terms of innate representational structures governed by rules. At the same time, George Miller (1962) and Herbert Simon (1969) were founding the fields of cognitive psychology and artificial intelligence. They began using computers to model processes such as memory, syntactic rules, plans, and schemata. This
convergence of interests was widely heralded as a “cognitive revolution” (Gardner 1989).

Archaeology responded cautiously to the cognitive revolution. It quickly adopted computers and quantitative modeling (Hodder and Orton 1976; Whallon 1972), but it studiously ignored the study of mental phenomena. This avoidance can be attributed to the dominance of the new archaeology and its critique of the “normative view of culture,” defined as the study of past belief systems. Binford (1965:204), for example, famously professed that archaeologists were poorly trained to be “paleopsychologists.” He advocated an ecological and evolutionary approach that emphasized culture process (see Chapter 5). As Trigger (1989:303) has noted, “within an ecological framework specific psychological factors can be viewed as an epiphenomenal aspect of human behavior that arose as a consequence of ecological adaptation.” Given these theoretical strictures, there was little incentive to pursue research on past cognition.

The first identifiable steps toward a cognitive archaeology can be seen in the early 1970s as part of the critique of the ecological and economic approaches. In a little cited article, Alice and Tom Kehoe (1973:150) challenged the validity of the standard ecosystemic approach and proposed that archaeology refocus itself around the cognitive basis of human life. They justify this realignment on the grounds that cognition is humanity’s most distinguishing characteristic. They write that “the archaeologist must approach his data with the expectation of describing concrete objects that in reality had their primary cultural existence as percepts in topological relation to one another within the cognitive schemata of human beings” (Kehoe and Kehoe 1973:151, their emphasis). Similarly, Kent Flannery and Joyce Marcus (1976) critiqued the ecosystems approach and offered a more holistic model of prehistoric Oaxacan behavior. They advocated combining cosmological beliefs derived from ethnographic accounts with standard processual studies of subsistence and settlement. Their main insight is that the way in which the Zapotec people of the Valley of Oaxaca conceived of their climate and natural environment was an integral component of their long-term adaptation. They conclude that ancient Zapotec people expressed their social relations through ritual practice, incorporating historical observations about ecological knowledge into an ideology of social and natural reproduction.

At the same time, Robert Hall developed a critique of the “econothink” of the new archaeology and advocated an explicitly humanist science of culture. For him, a cognitive archaeology is possible and desirable because of the universal human associative mental processes involved in much of language, magic, curing, literary and artistic expression, and science, and the resulting interdependence of the cultural subsystem based upon these mental processes (Hall 1977:500). He writes that “cognitive archaeology begins with the assumption that we cannot really
interpret prehistory without making a conscious attempt to understand the nature of humans as symbol-using social animals affectively involved in a perceived world that they have helped to create” (Hall 1977:515).

The first archaeologist to engage systematically with the cognitive sciences was Thomas Wynn (1979, 1981, 1985), who conducted a series of studies of Paleolithic stone tool industries. Inspired by Jean Piaget (1947), he applied a developmental stage model to the study of stone tool use. His central argument is that the phases in the mental development of children are analogous to phases in the cognitive evolution of hominids. This is, of course, the famous “ontogeny recapitulates phylogeny” thesis originally proposed by the 19th-century German zoologist Ernst Haeckel. Wynn conducted a symmetry and spatial competence analysis of Acheulean hand axes from the Isimila site in Tanzania dating to between 170,000 and 330,000 years ago. He concludes that “the later Acheulean hominids employed in their stone knapping the infra-logical operations of whole-part relations, qualitative displacement, spatio-temporal substitution and symmetry. These complex geometric relationships cannot have been accidentally imposed. It is therefore necessary to conclude that operational intelligence is the minimal competence attributable to these hominids” (Wynn 1979:383). This indicates to him that later Acheulean hominids possessed a modern mind.

Wynn came to the opposite conclusion after a series of similar studies of stone tools associated with Oldowan hominids (Wynn 1981, 1989, 2002; Wynn and McGrew 1989). The Oldowan tools are the oldest reliably dated stone tools at 2.5 million years old. They are named “Oldowan,” after the location of their first discovery at Olduvai Gorge in Tanzania. Unlike the later Acheulian stone tools, these tools exhibit no evidence of symmetry and the main focus is on preparing the edges. Only basic percussion flaking is required to manufacture the tools. He interprets this finding to suggest that the Oldowan hominids did not possess cognitive capacities for shape recognition or mental imagery. Wynn concludes that all the spatial concepts needed for Oldowan tools are present in the minds of apes. The implication is that the Oldowan mind is not yet human.

Despite these antecedents, very little progress was made toward developing a theoretical framework for an integrated cognitive archaeology until Colin Renfrew’s inaugural address, entitled “Towards an Archaeology of Mind,” given at Cambridge University in 1982 (Renfrew 1982). In his address, Renfrew posed three fundamental research questions for a cognitive archaeology. These include the nature of intelligent behavior, the methods for recognizing such behavior in the archaeological record in the absence of informants, and the procedures for making inferences from material culture about such behavior. The first question is a major issue in the cognitive sciences, while the subsequent two are methodological questions specific to archaeology.
In addition to these questions, Renfrew made two observations about an archaeology of mind. The first is its necessary relationship with a social archaeology that focuses on the symbol. He writes, “(i)f the use of symbols is one of the clearest indicators of the functioning of the mind, then the development of a social archaeology is a significant step towards an archaeology of mind” (Renfrew 1982:13). The second point is the need to broaden the archaeology of the mind from the study of the cognitive capacities of hominids to a consideration of the cognitive capacities of all of humankind. He writes that a study of cognition should properly include “the whole story of human achievements” which “gains momentum after the development of farming and of permanent settled life in several areas of the world” (Renfrew 1982:13).

Cognitive archaeology came of age in 1990 when Renfrew and Ezra Zubrow organized the first professional conference on the topic at Lucy Cavendish College, Cambridge University. There were five conference goals: (1) to identify the trends in artificial intelligence, cognitive psychology, and cognitive anthropology, (2) to assess the present level of theory in cognitive archaeology, (3) to determine what tools and methodologies are appropriate, (4) to discover what problems are amenable to solution given the current state of cognitive archaeology, and (5) to discover how scholars in different cognitive fields use archaeological data. In his introduction to the conference proceedings, Colin Renfrew (1994a:5) characterized cognitive archaeology in general terms as the study of the “specially human ability to construct and use symbols” in order to understand how cognitive processes operated in specific contexts. Zubrow (1994:187) expanded this definition to include both the evolution of human mental abilities and their material representations and how the cognitive processes of archaeologists affect the practice of archaeology. He suggests that this latter aspect might be termed “reflexive archaeology.” This resonates with the calls by some postprocessualists for greater self-reflexivity in archaeology (Hodder 1992, 1997; Potter 1991).

The Cambridge conference immediately raised the visibility of cognitive archaeology and generated a variety of responses. For Christopher Peebles (1993), cognitive archaeology is intimately associated with the cognitive sciences and contemporary philosophical investigations of the human mind. Barbara Bender (1993b:257) offered the view that it focuses on “how people perceive and understand themselves, their relationships, and the world (real or imagined) around them.” Kent Flannery and Joyce Marcus (1993:261) considered it as “the study of all those aspects of ancient culture that are the product of the human mind.” Ian Hodder (1993:257) suggested that all aspects of cognition are partially social and that their investigation must be embedded in a hermeneutic methodology. To a large extent, this diversity of views still characterizes the subfield today.
Perhaps the most productive area of research in cognitive archaeology is the evolution of mind. This topic has brought together archaeologists, anthropologists, psychologists, philosophers, sociologists, and animal behaviorists in a productive dialogue and several major syntheses have now been published (Deacon 1997; Donald 1991; Lewis-Williams 2002; Mithen 1996; Noble and Davidson 1996). This cross-disciplinary research has, in turn, stimulated several conferences and workshops. James Steele and Stephen Shennan (1996), and Steven Mithen (1998) chaired sessions at the Theoretical Archaeology Group meetings in 1992 and 1995. Barbara King (1999) organized a School of American Research advanced seminar on “The Origins of Language: Assessing the Evidence from Nonhuman Primates” in 1996. In the same year, April Nowell (2001a) organized an interdisciplinary session entitled “The Archaeology of Intelligence” at the Society for American Archaeology meetings and Colin Renfrew and Christopher Scarre (1998) convened a conference on “The Archaeology of External Symbolic Storage: The Dialectic between Artifact and Cognition” at the McDonald Institute at Cambridge. The semiotician Paul Bouissac (1994) edited a special issue of _Semiotica_ on “Prehistoric Signs” and organized a roundtable entitled “Criteria of Symbolicity” at the European Archaeology Association meetings in 2003.

**Evolutionary Studies**

Cognitive archaeology is predicated on the only viable unitary theory in the human sciences, namely evolutionary theory. There is broad agreement that natural selection has shaped the human anatomy and brain to make language and thought possible. The study of the evolution of mind thus requires a consideration of the communicative and cognitive abilities of hominids and humans as well as a consideration of the biological mechanisms that enabled these developments. There are four interrelated research areas currently being pursued – intelligence, language, tool use, and art – and considerable research is directed toward investigating the degree to which the developments in these different areas co-occur. For example, is tool use evidence for language or did language precede tools use? Are language and consciousness related? In addition, scholars have been interested in a series of cross-species comparisons. Is human language unique in the animal world, or does it have meaningful precursors in animal communication? What are the cognitive differences between primates, Neanderthals, and anatomically modern humans?

**Intelligence, symbolism, and language**

Most cognitive archaeologists consider intelligence to be closely related to, if not identical with, symbolic behavior. There is now a general consensus that
humans exhibited symbolic behavior by the Upper Paleolithic, approximately 35,000–40,000 years ago (Chase and Dibble 1987; Noble and Davidson 1996). This consensus is based upon archaeological evidence such as lithic assemblages, burials, and art. Prior to that time, the evidence for the use of symbols is substantially more controversial. Some archaeologists argue for the initial use of symbols followed by the gradual emergence of syntax (Noble and Davidson 1996) while others see them as co-occurring (Mellars 1991). In what follows, I review some of the major competing scenarios offered by archaeologists, biological anthropologists, and psychologists.

Merlin Donald (1991), a psychologist, has proposed the thesis that symbolic thought emerged from a pre-symbolic form through the gradual embedding of new representational systems. He writes that “the functional locus of consciousness can shift, depending on the representational system currently in command” (Donald 1991:369). Like Wynn, Donald adopts a developmental approach taken from Piaget and Vygotsky, to explain language evolution. According to this view, the development of children’s cognitive capacities follows a regular developmental sequence. By analogy, Donald’s model identifies four stages of consciousness – “episodic consciousness,” “mimetic consciousness,” “mythic consciousness,” and “theoretic consciousness,” and three cognitive transitions – “intentionality,” “language,” and “external symbolic storage” (Table 7.1).

Donald’s first stage, the “episodic stage,” is the direct and instantaneous representation of knowledge. It is unmediated by thought and tightly bound to survival strategies within a particular environmental context. This is the most rudimentary kind of consciousness and is characteristic of all life. It was the only cognitive form of the early hominids and is the form exhibited by current primates. The “first cognitive transition” is associated with the “mimetic stage,” a nonverbal system of action-based representations at approximately 4,000,000 years ago. This is when intentionality emerges and this separates Homo erectus from all other apes. It is associated with a revolution in motor skills which enabled greater control over bodily actions. Hominids were thereby able to imitate older and more sophisticated members of their social group. This emulation led, in turn, to the rapid emergence of non-verbal culture, which enabled the communication of intentions and desires and, on a larger scale, enabled public storage of information and transmission of knowledge over generations. He notes that elements of this persist to the present in elementary craft and tool use, pantomime, dance, athletic skill, and prosodic vocalization, including group displays.

Donald’s “second cognitive transition” is associated with the “mythic stage” beginning some 500,000 years ago when humans developed distinctive neuronal and anatomical systems that facilitated language and the telling of stories. This second stage is associated with the rise of Homo sapiens. Donald notes that oral
Table 7.1  Stages in the cognitive evolution of primate/hominid culture (Donald 1998:Table 1.1).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Species/period</th>
<th>Novel forms of representation</th>
<th>Manifest change</th>
<th>Cognitive governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPISODIC</td>
<td>primate</td>
<td>complex episodic event-perceptions</td>
<td>improved self-awareness and event sensitivity</td>
<td>episodic and reactive; limited voluntary expressive morphology</td>
</tr>
<tr>
<td>MIMETIC</td>
<td>early hominids</td>
<td>non-verbal action-modeling</td>
<td>revolution in skill, gesture (including vocal), non-verbal communication, shared attention</td>
<td>mimetic; increased variability of custom; cultural ‘archetypes’</td>
</tr>
<tr>
<td>(1st transition)</td>
<td>4M-0.4 Mya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MYTHIC</td>
<td>sapient humans</td>
<td>linguistic modeling</td>
<td>high speed phonology, oral language; oral social record</td>
<td>lexical invention, narrative thought, mythic framework of governance</td>
</tr>
<tr>
<td>(2nd transition)</td>
<td>0.5 Mya-present</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THEORETIC</td>
<td>recent sapient</td>
<td>extensive external symbolization, both verbal and non-verbal</td>
<td>formalisms, large-scale theoretic artifacts and massive external memory storage</td>
<td>institutionalized paradigmatic thought and invention</td>
</tr>
<tr>
<td>(3rd transition)</td>
<td>cultures</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
culture is a specialized form of culture that supplements mimetic culture. The governing representation of this stage consists of a shared narrative tradition that is permeated by mythic archetypes and allegories. Language was “a whole new way of representing reality” (Donald 1991:259, his emphasis). It made possible more sophisticated means of memory recall than possible with mimesis and quickly took over all non-verbal forms of representation. It became controlled by a relatively small elite who were responsible for narrative and myth.

Finally, Donald’s “third cognitive transition” is the “theoretic stage” indicated by the invention of symbolic and notational systems of recent sapient cultures. It is characterized by paradigmatic or logico-scientific thinking and serves to preserve memories and transmit complex forms of culture. It is dominated by an elite that relies upon codified laws, economic and bureaucratic management, reflective scientific and cultural institutions that are external to the individual memory system.

Terrence Deacon (1997), a biological anthropologist, has offered a rather different explanation for the origin of symbolic thought. Rather than employing a developmental approach, he takes as his starting point the problem of reference. Deacon notes we tend to confuse different modes of reference and thus fail to appreciate just how they are imbricated with one another. Following Peirce, he holds that reference is fundamentally hierarchical in nature – more complex forms are built up from simpler ones. More specifically, symbolic reference depends upon indexical reference which in turn depends upon iconic reference. This means that in order to understand symbolic reference one needs to start with icons and work upwards to indexes and then finally to symbols. To be conscious of something is to experience a representation of it (Deacon 1997:448). A change in how something is represented will result in a change in consciousness, which implies that consciousness of iconic representations should differ from consciousness of indexical representations, and this in turn should differ from consciousness of symbolic representations. These modes should not be seen as alternatives, but rather as a nested hierarchy where conditions in lower levels of consciousness are required for the emergence of higher levels. Deacon then proposes that every living thing exhibits consciousness at the iconic and indexical levels, but only humans manifest it at the symbolic level. The implication here is that the evolution of symbolic communication has changed the nature of consciousness itself.

For Deacon, this means that language is its own prime mover. As he puts it, “an idea changed the brain” (Deacon 1997:322). Here he draws upon a modification of Darwinian theory due to James Baldwin, which holds that learning and behavioral flexibility can play a role in biasing natural selection. He regards the emergence of symbolic representation as “the only conceivable selection pressure for such an extensive and otherwise counterproductive shift in learning emphasis” (Deacon 1997:336). He has suggested that language emerged from a set of universal semiotic
constraints that are associated with the complex relationships between words and
what they signify.

Deacon (1997:368–369) suggests that *Homo erectus* achieved a highly stable
adaption which supported a complex symbolic culture that allowed the organiza-
tion of work with a degree of flexibility unknown to any other species. He posits
that the relatively stable tool technology could have been associated with a broad
diversity of cultural and linguistic traditions from early to late *Homo erectus*. Dea-
con (1997:372) further proposes that Neanderthals were fully modern and our
mental equals; “we can hardly doubt that they had a symbolic communication
system every bit as sophisticated as their anatomically modern contemporaries.”
He regards the cave paintings of the Upper Paleolithic as the first direct expression
of a symbolizing mind (Deacon 1997:374). The storage of symbolic information
outside the brain marks a change in human culture, but it does not correlate with
an advance in human biology. Deacon doubts that it indicates the origins of sym-

dolic communication or even spoken language. For him, the invention of material
culture was “the beginning of a new phase of cultural evolution – one that is much
more independent of individual human brains and speech, and one that has led
to a modern runaway process which may very well prove to be unsustainable into
the distant future” (Deacon 1997:375).

Steven Mithen (1996), an archaeologist, has proposed that the key event in the
evolution of the modern mind is the shift from specialized intelligence to “cognit-
ive fluidity” during the Middle/Upper Paleolithic transition. As with Donald, he
adopts a modified version of the developmental model as it is used in current psy-
chology. Mithen’s distinctive contribution is the analogy of a cathedral as a means
of understanding the architecture of mind. He notes that just as it is impossible to
separate out the influences of the architectural plan and the building environment
on the cathedral, so too it is impossible to separate out the effects of genes and
the developmental environment in the mind (Mithen 1996:66). He then develops
a three phase model (Figure 7.1) suggesting that the mind begins with generalized
intelligence and then is augmented by modules, much like chapels that are added
onto cathedrals.

Phase 1 consists of minds dominated by a “nave” of general intelligence. Informa-
tion is provided by a series of input modules scattered within the nave. These
produce relatively simple behavior. Typically, the rate of learning is slow and
errors are frequent. Mithen interprets the first modern primates, the omomyids
and adapids, which emerged at 56,000,000 years ago as possessing general intelli-
gence. Of significance is the fact that their brains are larger than one might expect
given their body size when compared to other contemporaneous mammals.

Phase 2 refers to minds with naves to which isolated chapels of specialized
intelligence have been added. Each chapel is composed of closely related modules
Phase 1
Minds with a 'nave' of general intelligence and multiple 'chapels' of specialized intelligences. It remains unclear how that of language is related to the other cognitive domains. As we can assume that all minds of this phase were of people living by hunting and gathering, the three 'chapels' are social, technical and natural history intelligence.

Phase 2
Minds with a 'nave' of general intelligence and multiple 'chapels' of specialized intelligences. It remains unclear how that of language is related to the other cognitive domains. As we can assume that all minds of this phase were of people living by hunting and gathering, the three 'chapels' are social, technical and natural history intelligence.

Phase 3: Two possible architectural plans for Phase 3 minds.
These represent minds of people living by hunting and gathering. For those with other lifestyles, it is likely that other types of specialized intelligences will develop, although social and linguistic intelligence are likely to be universal.

Figure 7.1 Steven Mithen's cathedral model of the evolution of intelligence (Mithen 1996:67).

Therefore improving efficiency. This facilitated the learning process and ensured a minimum of errors. Mithen suggests that three chapels emerged during this phase. One focused on social intelligence to enable group interactions. Another was natural history intelligence, which is associated with understanding the natural world, especially the behaviors of plants and animals. Yet another was technical intelligence and related to the manufacture of stone and wooden artifacts. He then suggests that a fourth chapel, linguistic intelligence, may also be present.
A key feature is that these kinds of intelligence were isolated from one another. Social intelligence seems to have evolved among *Aegyptopithecus* at 35,000,000 years ago and characterized australopithecines at 4,500,000 years ago. The first examples of natural history and technical intelligence emerged with *Homo erectus* at 1,800,000–1,400,000 years ago. Language intelligence may date back to 2,000,000 years ago.

Phase 3 is indicated by minds in which the chapels have become connected. This connectivity or “cognitive fluidity” permits the sharing of knowledge across modules. As Mithen puts it, “experience gained in one behavioural domain can now influence that in another. Indeed distinct behavioural domains no longer exist. And brand new ways of thinking, subjects to think about and ways to behave arise” (Mithen 1996:71). Continuing his cathedral analogy, he says that the differences between Phase 2 and 3 minds are similar to the differences between Romanesque and Gothic cathedrals in terms of complexity of design. Language shifted from a social purpose to a general purpose function without an increase in brain size. The behavior of Early Modern humans reveals that natural history and social intelligences were the first two cognitive intelligences to be integrated, followed somewhat later by technical intelligence.

It is clear from this brief review that there is considerable debate on the issues of intelligence, consciousness, and symbolism. Donald proposes that *Homo erectus* is characterized by non-verbal, bodily based symbolic behavior while Deacon suggested that *Homo erectus* exhibits a stable and complex culture with linguistic diversity. Mithen reconstructs *Homo erectus* as the first hominid to integrate natural history and technological intelligences. Donald and Mithen see the use of artifacts preceding language, while Deacon regards them as co-occurring. Many other scholars have contributed to the topic as well. For example, Chase (1991) regards symboling as a form of creative behavior from which language evolves. Noble and Davidson (1996) take the view that gestures constitute the basis for more elaborate forms of symboling, such as language.

**Tools and sequential manufacture**

Stone tools provide the single most important surviving record of hominid behavior. This preeminent status is due to two factors. Stone tools have been used for the last two million years and are widely held to be one of the defining characteristics of what it means to be human. This latter view is well illustrated by the title of Kenneth Oakley’s (1949) popular book *Man the Tool Maker*. In the last 20 years, considerable research has focused on investigating technical skills and tool use among animals and comparing the results to hominid behavior (Gibson and Ingold 1993). It now appears that tool use is more widely shared among the
primates than has been previously supposed (Beck 1980; Boesch 1993; McGrew 1992). However, it remains the case that while tool use may not be uniquely human, hominids create and use a wider variety of tools than any other animal and they have a greater facility for the transmission of tool making information.

Tool manufacture is sequential. It involves a series of discrete steps carried out in a particular order to achieve a desired end-product. Many scholars have remarked on the similarity between the generative rules and linear principles of language and tool manufacture. The first to draw this analogy was André Leroi-Gourhan (1993), who used this observation as the basis of his famous *chaîne opératoire* technique. This technique identifies the sequencing of the stages and motor activities associated with tool production. As Leroi-Gorhan (1993:164) has written, “techniques are at the same time gestures and tools, organized in a veritable syntax, one which simultaneously grants to operational series their fixity and their flexibility.” This approach can theoretically be applied to any material sequence, but its greatest success has undoubtedly been in the analysis of stone tool technologies due to the constraints of the lithic reductive process (Pelegrin et al., 1988; Schlanger 1994; Young and Bonnischen 1984).

Ralph Holloway (1969) has also argued that the cognitive processes involved in tool making and language are the same. Both tool making and language are associated with standardization, sets of rules, and social interaction organized on a hierarchical level. He then examines three aspects of language processes (traditional transmission, productivity, and duality of patterning) and concludes that these processes are identical to the processes used in tool making. Holloway suggests that the widespread uniformity of stone tools throughout a large geographical area can be attributed not just to imitation and observational learning, but also to the emergence of language with grammar, syntax, and non-iconic symbolization. The implication is that tool making and language emerged in tandem.

The language analogy, however, has been sharply critiqued by Wynn (1993:396), who sees nothing in the production of material culture that is comparable to syntax. He does not, however, conclude that a semiotic approach is inappropriate. He writes that while tools are not words and do not possess syntax, they can and do “act as signs and symbols.” Borrowing from Peirce (via Cassion 1981), Wynn (1993:402) proposes that the most common semiotic role of a tool is as an index. He writes, “the choices an artisan makes when assembling a particular constellation of knowledge can come to be associated with one another and with the artisan, especially when constellations become recipes” (Wynn 1993:402). This is largely an unintended consequence of purposive behavior. He then observes that under certain circumstances the tool can come to have a symbolic value. Here the indexical role is overshadowed by the iconic form. Citing the Christian cross as an example, he notes that for the Romans it was a tool of execution, but for early
Christians it came to symbolize Christianity as an icon for the passion of Christ. He concludes that “instead of formulating unconvincing arguments about handaxes and syntax, perhaps archaeologists should pursue the more promising approach of general semiotics” (Wynn 1993:403).

Paul Bouissac (2003) has recently applied a semiotic approach to the study of artifacts. His concern is to clarify the criteria used by archaeologists to determine when an artifact is a symbol. Toward this end, he has identified internal and external properties of artifacts. Internal properties pertain to the artifacts themselves irrespective of their contexts. They include such things as dimension, density, complexity, complementarity, and replication. Extrinsic properties are related to contextual issues related to the symbolic functioning of the artifact at the time of its making and use. These include location, distribution, and context. He notes that it remains to be determined whether all, or a subset, of these criteria are necessary to provide a ground for establishing the symbolic nature of specific artifacts. He also leaves open the possibility of devising additional criteria. While the goal of increasing understanding by evaluating criteria is admirable, it is not clear just how this analysis resolves the problem of when an artifact is a symbol. Indeed, it can be argued that the distinction between internal and external properties shares some of the same problems as Saussure’s distinction of internal and external linguistics.

Art

Art has been an especially popular topic in the study of human evolution. Its origins are usually associated with the remarkable cave art of the Upper Paleolithic period at sites such as Lascaux and Altamira. Archaeologists have proposed numerous interpretations of these images ranging from fertility cults, sympathetic hunting magic, initiation rites, among other things (Bahn and Vertut 1988; Sieveking 1979; Ucko and Rosenfeld 1972). It has proven extremely difficult to resolve competing interpretations of Paleolithic art in a manner that is satisfactory to most researchers. Margaret Conkey (1997; Conkey with Williams 1991) cautions against trying to identify an original or transcendent meaning since symbolic meanings are arbitrary (in the linguistic sense) and culturally determined. At the same time, she draws attention to the effects of the research context on interpretation.

The new archaeology emphasized the adaptive significance of art as part of its processual outlook. Michael Jochim (1983), for example, has argued that Paleolithic art developed as a response to increasing population density during a period of environmental stress. He notes that by 25,000 bp climatic conditions in Northern Europe had become progressively harsh stimulating population movements south into the more favorable areas of southern France and northern
Spain. He suggests that this region, already rich in anadromous fish resources, became a refugia for plants, animals, and humans. This shift in settlement and focus on salmon fishing would have had social consequences such as the development of territorial fishing rights and sedentism. He then argues that ritual mechanisms were needed to facilitate social interaction and cooperation. Caves would have been the sites of these ritual activities and would have expressed variability in localized styles of cave painting.

Steven Mithen (1989) has offered a reinterpretation of Jochim’s study. He points out several empirical problems with the refugia thesis and then offers his own approach that emphasizes cognition and decision-making. He notes that the refugia thesis does not adequately explain which images were chosen for illustration and that, in fact, there are very few representations of fish. More significantly, he shows that fish remains are virtually absent in the archaeological record and isotopic studies have shown that fish do not become important as food resources until the Magdalenian period. Mithen then proposes that during periods of hunting failure, Upper Paleolithic hunters shifted from the cooperative killing of herd animals, such as red deer and reindeer, to the killing of individual animals by single hunters or small groups of hunters. He suggests that during this change-over new hunting information would be required and this could be reinforced by close association with painted images of animals. In this way, art facilitated the retrieval of knowledge relating to the tracking of large animals.

Despite their different starting points, there are some important similarities in the two studies. Both adopt the art-as-function thesis. Jochim takes a classic cultural ecological approach whereby the development of art is related to an external stress in the cultural system. Art emerges to solve a social problem. Mithen, on the other hand, adopts an evolutionary ecological approach by arguing that art as a ‘memory retrieval guide’ enhances the reproductive success of the society in question. On this argument, it is those groups that develop this particular form of communication that are favored. But neither approach really addresses the issue of the individual as knowledgeable actor, as both the creator of social practices and created by past social practices. In addition, there is no consideration of the transformative potential of art.

David Lewis-Williams (2002) has proposed the novel thesis that some Paleolithic art is an expression of shamanistic behavior produced under altered states of consciousness. Drawing upon neuropsychological research, he identifies specific mental images that are hard-wired into the human nervous system and that occur as a three-stage sequence (Lewis-Williams and Dowson 1988). In the first stage of altered consciousness, people experience geometrical forms that may include dots, grids, zig-zags, nested catenary curves, and meandering lines. These forms, called phosphemes or entoptic phenomena, may appear to expand, contract, scintillate,
or flicker. In the second stage, people seek to make sense of the geometric forms by relating them to familiar objects of experiences. These are culturally mediated. In the third and final stage, people see a vortex or tunnel. During this stage, the geometric forms are peripheral to iconic images of animals, peoples, and monsters. The subjects then feel that they are merging with the imagery and transforming into alternative states of being.

Lewis-Williams applied this model to ethnographically known contexts of graphic imagery believed to be associated with shamanism such as African San rock art (Lewis-Williams 1980, 1981), the rock art of the Great Basin (Whitney 1987, 1992), the art of the Tukano of South America (Reichel-Dolmatoff 1972, 1978), and the art of the Huichol of Central America (Berrin 1978). He finds evidence for geometric motifs (Stage 1), construed geometric images (Stage 2), and iconic images (Stage 3) in each case. He therefore concludes that art known from several independent shamanistic contexts possesses regular features that are consistent with the neurophysiological model of altered states of consciousness.

Lewis-Williams then used the model to interpret Upper Paleolithic parietal art which is not previously known to be shamanic. He finds that good evidence for examples of Stage 1 motifs such as dots, zig-zags, grids, and meandering lines. Significantly, he also finds motifs, such as spear-like forms, claviforms, and tectiforms, that do not appear to fit the model. He acknowledges that stage 2 motifs are difficult to identify because the geometric structure is masked by the representational form. He, nevertheless, identifies several possible examples, such as ibexes with extended horns that recall catenary curves. Finally, he identifies what he considers clear examples of Stage 3 forms, such as anthropomorphs, therianthropes, and animals superimposed on geometric forms. Some of these motifs are distorted, but many are realistic much like the San rock art. He concludes that this data is consistent with the hypothesis of Paleolithic shamanism.

Cognitive Processual Studies

The study of cognitive processes, the second branch of cognitive archaeology, is extremely diverse and eclectic. Unlike cognitive evolution research, there is no unitary approach to the field and little empirical research has been explicitly conducted under its banner. It currently draws from cognitive anthropology, computer science, psychology, geographical information systems, and philological analysis (Renfrew and Zubrow 1994). One problem has been and continues to be differentiating it in a principled way from all other contemporary archaeological approaches,
processual and postprocessual alike, which, whether they acknowledge it or not, study aspects of cognition.

Defining the field

The diversity of approaches is well illustrated by the competing characterizations of the field. Renfrew (1993, 1994a), for example, has identified six research areas where symbols are used to cope with fundamental aspects of human existence. These areas include design – coherently structured purposive behavior; planning – time scheduling and sometimes the production of a schema prior to carrying out the planned work; measurement – the use of devices for measuring, and units of measure; social relations – the use of symbols to structure and regulate inter-personal behavior; the supernatural – the use of symbols to communicate with the other world, and to mediate between the human and the world beyond; and representation – the use of depictions or other iconic embodiments of reality (Renfrew 1994a:6). Renfrew acknowledges that there may be other areas where symbols are used to structure human life, but these are the major ones.

Independently, Flannery and Marcus (1993) have offered their view of aspects of ancient cultures that are the product of the human mind. They identify cosmology – the perception, description, and classification of the universe; religion – the nature of the supernatural; ideology – the principles, philosophies, ethics, and values by which human societies are governed; and iconography – the ways in which aspects of the world, the supernatural, or human values are conveyed in art; and all other forms of human intellectual and symbolic behavior that survive in the archaeological record (Flannery and Marcus 1993:261). It must be noted that, for them, this program constitutes not so much a cognitive archaeology as a “holistic archaeology.”

Renfrew and Zubrow (1994) have provided a de facto classification of the field as indicated by the organization of their book The Ancient Mind. Here they identify cognitive archaeology as consisting of the study of cult practice and transcendental belief systems (Part III), prehistoric conceptions of space and time (Part IV), technology (Part V), and writing systems (Part VI). Most recently, Renfrew has sought to unify these different approaches under the heading of “material engagement theory,” defined as the cognitive processes associated with changing conditions in the material spheres of life (DeMarrais et al. 2004b; Renfrew 2001, 2004).

Religion and ritual

Religion is a key topic in cognitive archaeology because of its association with shared belief systems. Renfrew (1994b:47) observes that the propitiation of the
supernatural is one of the most important contexts in which symbols are used. Religion is associated with coping with the unknown. He notes that most religions provide a system for people to harmonize their relationship with the world and to cause certain desired results either through prayer or action. Using a typological approach much like Turner, he suggests that cult observances tend to have four features: they employ a range of attention focusing devices, they locate ritual at the boundary zone between this world and the next; they seek to attract the attention of a deity; and they involve active participation in the making of offerings (Renfrew 1985). He then identifies a set of 16 archaeological indicators for each of these features (Renfrew 1994b:51–52, Renfrew and Bahn 2000:359–360).

The first group of indicators is associated with the focusing of attention. Ritual may occur in a place with special, natural associations (e.g., a cave, a grove of trees, a spring, or a mountain-top) or alternatively, in a special building set apart for sacred functions (e.g., a temple or church). The place used for the ritual may employ attention-focusing devices in the architecture (e.g., altars, benches, hearths) and in movable equipment (e.g., lamps, gongs and bells, ritual vessels, censers, altar cloths, and all the paraphernalia of ritual). The place devoted to ritual observance is likely to have multiple repeated symbols (i.e. redundancy).

The second group relates to the boundary zone between this world and the next. Ritual may involve both conspicuous public display (and expenditure) and hidden exclusive mysteries, whose practice will be reflected in the architecture; and concepts of cleanliness and pollution may be reflected in the facilities (e.g., pools or basins of water) and maintenance of the sacred area.

The third group addresses the presence of the deity. The association with a deity or deities may be reflected in the use of a cult image or a representation of the deity in an abstract form (e.g., the Christian Chi-Rho symbol). The ritualistic symbols often relate iconographically to the deities worshipped and to their associated myth. Animal symbolism (of real or mythical animals) used where particular animals reference to specific deities or powers. Such symbols are typically associated with those seen in funerary ritual and in other rites of passage.

The fourth group is linked to ritual participation and the making of offerings. Because worship usually involves prayer and special bodily postures (e.g., kneeling), these may be depicted in art or iconography. The ritual ceremony may employ various devices for inducing an altered state of consciousness (e.g., dances, music, drugs, and the infliction of pain). Animal or human sacrifice may be practiced. Food and drink may be either poured in libation or consumed on behalf of the deity. Other material objects may be brought and offered (votives). The act of worship may entail the breaking, hiding, or discarding of offerings. Often there is a great investment of wealth both in the equipment used and in the ritual architecture.
Renfrew intends these archaeological indicators to be understood as empirical generalizations of broad application. He explains that while not all “belief systems involved are similar or even comparable, . . . the term ‘religion’ carries with it certain correlates which are certainly general if not necessarily universal and by which the investigation can be advanced” (Renfrew 1994b:51). He also cautions that these correlates should not be used as a mechanical check-list and there is no particular “score” which can be considered as conclusive evidence for the identification of the presence of religion and ritual in the archaeological record.

Flannery and Marcus (1994) offer an approach to the study of religion that integrates three methods: the direct historical approach, the analysis of public space and religious architecture, and the contextual analysis of religious paraphernalia. Taking as their case study ancient Zapotec ritual and religion, they begin with an ethnohistorically based account of its features during the 16th century. At this time, Zapotec religion was an animistic religion which attributed life to things on the basis of a vital force, *pée* or *pî*, a word which they translate as “breath,” “spirit,” or “wind.” Ritual practice was associated with the worship of supernatural forces, such as lightning and earthquake, and reverence for the ancestors, *peniglôlazaa*, “cloud people.” It was performed in the standardized two-room temple known as the *yoho pée*, “sacred house” or “house of the vital force,” and staffed by full-time priests. World order and harmony was achieved through reciprocity whereby blessings were acquired through sacrifice. Sacrifice ranged from the serving of food and drink, to autosacrifice (bloodletting), to human sacrifice, depending upon the severity of one’s need.

Flannery and Marcus then apply this approach to the analysis of ritual architecture and deposits at San José Magote. In the course of their excavations, they discovered a series of three superimposed T-shaped temples (Structures 36, 35, and 13) dating from 200 B.C. to A.D. 200. Each faced west and had an open court with a private inner room. All were destroyed and then deliberately leveled. The best preserved was Structure 35 which had an intact floor assemblage. It included two broken, leaf-shaped obsidian knives, the tip of a bifacial lancet, 42 prismatic blades, and five flakes. The knives are of the form associated with human sacrifice while the lancet and blades are artifacts related to ritual bloodletting by priests.

Beneath the floor, Flannery and Marcus found five offering boxes, one of which, Feature 96, contained seven ceramic objects arranged in a scene with two deer horns and a quail skeleton (Figure 7.2). The center of the scene was a miniature tomb containing an open bowl holding an effigy vessel, known as an *acompañante* because of its common occurrence in tombs. This effigy figure can be identified as a member of the nobility by his ear spools and bead necklace. Placed on the roof of the tomb was a flying human figure wearing the mask of Lightning associated with the deity *Cociyo*. He holds a wooden stick and has a forked serpent tongue.
wrapped around his hand. These objects appear to be related to agriculture. The wooden stick may be a digging stick and the serpent may refer to maize, since the Zapotec words for each are homonyms and are often used interchangeably. Standing behind the tomb are four effigy vessels representing kneeling women. Their heads are hollow and may have been receptacles to contain clouds, rain, hail, and wind, the four elements that accompany Cociyo. Flannery and Marcus interpret this scene as representing a deceased lord metamorphosing into a “cloud person” who is in contact with Lightning.

These two contributions to the study of religion offer some interesting points of comparison. Renfrew’s approach is designed to identify religion in the archaeological record. It is largely typological and draws from cross-cultural generalizations to specify material culture indicators. Renfrew (1985) has applied a version of this method to the study of Late Cycladic religion and religious architecture. Flannery and Marcus’s approach begins with an ethnohistorically known religion, the Zapotec religion, and seeks to understand its antecedents through the integration of two independent lines of archaeological evidence – the architectural and artifactual. There are clear similarities between Renfrew’s and Flannery and Marcus’s correlates. However, Flannery and Marcus emphasize the importance of the Zapotec worldview in organizing these correlates into a coherent system. Except for the
emphasis on methodology, it would be hard to distinguish these approaches from standard archaeological studies of religion.

Universal categories and local expressions

One challenge in the study of cognitive processes is the problem of universals. What are they, how are they given cultural expression, and how can they be identified in the archaeological record? This problem is analogous to Universal Grammar and language diversity in linguistics (Chomsky 1968). Zubrow (1994) has examined the question of cognitive universals in his discussion of “knowledge representation” and archaeology. He observes that in the cognitive sciences the term was originally associated with “natural languages,” but that its use has now broadened to encompass artificial intelligence. Knowledge representation can thus be defined as the coding of information independent of medium.

Zubrow acknowledges that how humans encode information is still not well understood. Nonetheless, it is clear that the process transcends culture and time. He writes, “archaeologists stand before the material and symbolic realms of human cognition in much the same way their intellectual forebears stood a century or more ago before the biological and genetic realms of their day” (Zubrow 1994:109–110).

Zubrow (1994:110–111) has identified a set of universals that he considers to be shared by all modern cultures. These may be used in a set of rules like a grammar. These are: inclusion – when an object includes an object, bisection – when an object or space is bisected in two, contiguity – when the object or space is contiguous to the object or space, contingency – when an object or space is dependent on and temporally determined by an object or space, equivalence – when the object or space is equivalent to an object or space, temporality – when the object is temporally contingent but not dependent on the object, and orientation – when objects and space are oriented according to their spatial reference. He regards these universals as potential building blocks for understanding cognition and the baseline for making comparisons.

Zubrow then develops a research design for the study of Late Woodland period settlement pattern in the Niagara Frontier district, the westernmost extent of the Iroquois territory. He is particularly interested in the articulation of three concepts – the ideal, the real, and the cultural. The ideal refers to the ideal models of settlement pattern which may exist in the mind of prehistoric people. The real is associated with topographic reality and the spatial relations of land and water. The cultural includes such features as trade routes or traditional homelands that may influence settlement pattern. He then applies a two-step methodology where the first step involves the simulation of a series of ideal patterns based upon thematic spaces and the documentation of the empirical pattern in GIS.
The second step involves transforming the ideal into the real by means of different geographic algorithms that emphasize different cognitive universals. Zubrow generated a series of five ideal patterns based upon models of simple geometry, homeland, trade routes, wampum-belt, and longhouse. Of these the longhouse model using the rules of contiguity, orientation, and equality, but not inclusion, bisection, or temporality, provided the best approximation of the settlement pattern. He concludes that because settlement patterns are complex mixes of cultural ideals, economic activities, and topographic reality, sophisticated knowledge representation approaches are needed. This approach is a valuable attempt at systematization, but it can be argued that the ideal and the real are both cultural.

Technology and writing systems

Another topic in the study of cognitive processes is the material basis of cognitive inference. This area has been explored largely through studies of technology and writing systems. Both technology and writing systems are external storage systems in the sense discussed by Donald (1991). Indeed, writing systems can be seen as a special form of technology associated with increasing the reliability of external storage and information recall.

The chaine opératoire technique, borrowed from evolutionary research, is one of the most popular methods for studying technologies. A good example is provided by Sander Van der Leuuw’s (1994) study of contemporary Tarascan pottery making in Michoacan, Mexico. He begins with a discussion of three fundamental conceptualizations associated with the shaping of ceramics. The first of these is topology. Does the potter see the shape as a predominantly vertical or horizontal one? Is the vessel a transformation of a sphere, cone, or cylinder and is the transformation a stretching or compressing process? The second is partonomy. This refers to the ways in which the potter divides the pot into parts. Is the pot made from coils, from two or more pot segments, or as an entire unit? The third is sequence. Is the pot made from bottom-to-top or top-to-bottom, etc. Van der Leuuw regards these three concepts as the basic anchors for all pottery making traditions. He notes that they are resistant to change because they are widely shared and are largely unconscious.

He then identifies several general constraints and executive functions related to the production process regardless of method of manufacture (van der Leuuw 1994:137). The constraints include: the force of gravity on the object under construction, which may cause the vessel to sag or even collapse during construction; the access which the potter has to have to various parts of the vessel while it is being shaped; the composition of the raw materials at the potter’s disposal; the speed with which the vessels are made; control over the shape; and the width of the range
of shapes which the technique allows the potter. The executive functions associated
with shaping the clay include squeezing the clay, supporting the vessel, controlling
the shape of the vessel, and turning the pot. Those associated with modifying an
existing shape include cutting, scraping, and smoothing. These executive functions
are open to modification or substitution and reflect conscious choices.

Van der Leeuw defines a production sequence consisting of 21 discrete steps
of which eight are optional depending upon the desired outcome (van der Leeuw

(1) delving of the two clays needed (one called “red,” the other “white,” although
these concepts are but relative)
(2) only in dry season: grinding the clay to a fine powder
(3) mixing and kneading the clays to prepare the paste
(4) cutting a ball of paste of sufficient size to make the whole pot
(5) hammering the paste with a mushroom-shaped pestle
(6) only if the vessel is to be made in more than one mould: cutting the paste
into the required number of lumps
(7) flattening the lump(s) into (a) “pizza(s)”
(8) placing each “pizza” of paste in, or over, a mould
(9) pressing it against the mould, while at the same time smoothing the side
which does not come into contact with the latter
(10) only if making the vessel requires more than one mould: placing the moulds
against each other and smoothing the join on the inside
(11) drying the paste for a short time
(12) removing the newly made shape from the mould
(13) drying the vessel until leather-hard
(14) smoothing the surface which was in contact with the mould
(15) only where applicable: polishing part of the surface with a pebble or other
smooth tool
(16) drying the vessel until bone-dry
(17) only where applicable: paint decoration
(18) only where applicable: dip in glaze
(19) firing vessel
(20) only where applicable: dip in glaze
(21) only where applicable: refire

He notes that the only way to study the cognitive structure underlying this sequence
is to examine variations among potters.

The study of ancient writing systems has recently emerged as a topic for cog-
nitive processual archaeology. Writing systems can be seen as special systems of
external symbolic storage and are the places where language and material culture come together. John Justeson and Laurence Stephens (1994:167) highlight several advantages of studying writing systems. These include the following: its status as a cognitive system is not in doubt, there is often enough data to permit valid statistical analysis, there is often developmental evidence permitting comparative studies, and texts are often datable by means of absolute chronologies. In an innovative study of cuneiform Elamite, Justeson and Stephens emphasize the importance of repetition and categorization in the evolution of writing systems. In particular, they focus on proximate repetition, the tendency toward the use of a spelling convention recently used in the same or a similar context. They conclude that the evolution of writing systems is structured and that once the system is modified by a change introduced either in the symbols used or in their context, adjustment to this change depends upon these same associations along with the contexts within which the novel elements are introduced.

Material engagement theory

Renfrew (2001, 2004) has recently proposed a new direction in cognitive archaeology that he calls “material engagement theory.” He explains that his approach was inspired by what he calls the “sapient paradox.” According to Renfrew, the common view is that there was a single decisive moment when language, consciousness, and material culture all appeared and this coincided with the emergence of our own species, perhaps 150,000 years ago and at least by 40,000 years ago. Yet, there were few changes in social, political, and economic organization after this moment for approximately 30,000 years. He concludes that this delay indicates that language by itself did not make much of a difference in cultural evolution. His answer to the sapient paradox is that the decisive factor was the development of a new kind of human engagement with the material world. He writes, “it was when some of these materials themselves took on, or were led to take on, symbolic power that the process of engagement became a powerful driving force for social and economic change” (Renfrew 2001:127).

This new kind of engagement was facilitated by the emergence of a sedentary lifestyle. Material symbols were created through a process of “substantialization.” Here he emphasizes that it is incorrect to presume that mind precedes practice and concept precedes material symbol. He writes, “symbols are not always just the reflection or ‘materialization’ of pre-existing concepts. The substantive engagement process brings the two forward together” (Renfrew 2001:129). His material engagement theory is thus an attempt to join the physical and conceptual aspects of materiality, where the term “engagement” is used to indicate a unifying relationship in contrast to the standard oppositions of mind and matter, symbol and
referent, and signified and signifier. For Renfrew (2004:30), the material culture of any society is a vast continuing engagement that defines the corporate life of that society.

Lambros Malafouris (2004) has offered a modification to material engagement theory. He begins with a cogent critique of the computational view of cognition. The computational view is that the mind is a passive storehouse designed to receive and process external sensory information. Malafouris shows that this view results in a mind detached from reality and fails to acknowledge that the body as well as the mind engages with the world. He offers a perspective, drawn in part from current work in cognitive science (Clark 1997), that posits that material culture is not separate from mind, rather it is consubstantial with it. He writes that “although we may well be able to construct a mental representation of anything in the world, the efficacy of material culture in the cognitive system lies primarily in the fact that it makes possible for the mind to operate without having to do so: i.e. to think through things, in action without the need of mental representation” (Malafouris 2004:58, his emphasis). This view of the extended mind bears some similarities to habitus and the idea of the distributed self (Gell 1998; Strathern 1988).

Summary

Cognitive archaeology is an intellectual heir of both structural and cognitive anthropologies. It retains the focus on cognitive universals, but at the same time rejects the methodology of structural analysis because of a perceived lack of rigor. After a cautious beginning, it now embraces the interdisciplinary program of cognitive anthropology and advocates new methods drawn from psychology and experimental studies. Renfrew (1993, 1994a, Renfrew and Bahn 2000) has consistently stressed the continuity with processual archaeology, arguing that cognitive archaeology is simply the next phase in its development. However, it can be argued that because of its commitment to the mind as an active constituent of culture, it diverges radically from the standard Binfordian version of processual archaeology, which regards mind as epiphenomenal. For example, Hill (1994:90), a leading processualist, has questioned the value of cognitive archaeology suggesting that, although interesting, it may not emerge as a very important pursuit.

In some ways, the temporal division of the field between evolutionary and processual studies is problematic. Is the “origin of art” during the Upper Paleolithic properly conceived as the study of cognitive evolution or cognitive process? In addition, the division tends to perpetuate the long-standing divide between diachronic and synchronic studies of cognition. Nevertheless, it is the case, that the evolution of mind research is firmly established and theoretically coherent, largely
due to the adoption of evolutionary theory as its guiding philosophy. Cognitive processual research, on the other hand, is not so clearly defined. There is no single guiding theory for social process and there are good reasons to believe that there can never be one. Despite the claims to the contrary, there is considerable overlap with processual and postprocessual archaeologies in terms of subject matter, if not method. It seems difficult to argue that ideology can be separated from technology and religion distinguished from cosmology.

It is significant that both cognitive evolutionary and processual studies are making use of semiotics broadly conceived. Wynn (1993) has drawn attention to the potential of these approaches in understanding the evolution of material culture signs. Symbolism is routinely identified as an important step in cognitive evolution either in the form of self-consciousness and language. Several scholars, such as Wynn (1993), Chase (1991, 1999), and Noble and Davidson (1996) have productively engaged with either Saussurian or Peircian approaches and, in some cases, both. To date, Deacon (1997) has offered the most sophisticated engagement with Peircian semiotics to account for the co-evolution of language and the brain. Material engagement theory may serve as a means of integrating some of this research on symbolic behavior. However, despite the significance of symbolism to cognitive archaeology, there has been remarkably little consideration of how symbols actually work.
PART III

Archaeological Case Studies
The spirit of a society is stamped upon its architecture. Do not the inanimate constructions which surround us proclaim the want of a new social order? Do not they speak to us ... of the falseness of society and the urgent necessity of a great Social Reform?

Albert Brisbane (1843:23)

Social reform was a prominent discourse in the United States in the first half of the 19th century (Guarneri 1991; Rose 1981). During this period, social issues such as abolitionism, women's rights, temperance, Grahamism, labor associations, education, and prison and asylum reform were popularly debated in almost every major city. Numerous national coalitions were formed such as the American Anti-Slavery Society, the Women's Rights Movement, and the American Tract Society. While these reform movements did much to raise the visibility of specific causes, none of them developed a coherent model of a new society. This task was left to the numerous utopian visionaries and their communities springing up across the country. These communities were committed to changing society by example and this required putting their radical ideas about economic and social organization into practice.

Over 60 utopian communities were founded in the decade from 1840 to 1850 (Berry 1992; Hayden 1976). The reformist zeal in New England is well captured in a letter by Ralph Waldo Emerson to Thomas Carlyle written in 1839 which recounted that “we are all a little wild here with numberless projects of social reform. Not a reading man but has a draft of a new community in his waistcoat pocket” (cited in Guarneri 1991:13). These communities included the Owenites in Pennsylvania, Wisconsin, Indiana, and Ohio; the Oneida Perfectionists in New York; the Icarians...
in Illinois and Texas; the Transcendentalists in Massachusetts; and the Mormons in Illinois, Utah, and Nevada. By far the most popular of these groups were the Fourierists, devotees of the teachings of French social theorist Charles Fourier. Between 1842 and 1858, 28 Fourierist phalanxes, unions, and societies were established in ten states (Table 8.1).

One of the most famous of these communities was Brook Farm in West Roxbury, Massachusetts. This fame is largely due to the scholarly and literary inclinations of

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<tr>
<th>No.</th>
<th>Community</th>
<th>City</th>
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<td>Fourier Phalanx</td>
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its members and sympathizers (Buell 1986; Miller 1950). The most distinguished Brook Farm author is Nathaniel Hawthorne, the first Treasurer of the Brook Farm Association. Hawthorne’s (1852) popular novel *The Blithedale Romance* is a fictionalized account of daily life in the community during its Transcendentalist incarnation. George Ripley, the founder of the community, edited a popular series entitled *Specimens of Foreign Standard Literature* and translated leading German and French philosophers into English. In addition, he was a regular contributor to *The Dial*, the Transcendentalist literary journal edited by Margaret Fuller. Upon its demise, he and fellow Brook Farmers, Charles Dana and John Dwight, wrote for the *Harbinger*, a pro-Fourierist journal devoted to social reform and published for three years at Brook Farm (Delano 1983). In addition, letters and notes of individual members are preserved (Cooke 1971; Dwight 1928; Haraszti 1937; Hawthorne 1932) and reminiscences by former members and students have been published (Codman 1894; Myerson 1978; Russell 1900; Sears 1912).

In this chapter, I adopt a semiotic perspective to reveal new insights into the relationships between the ideologies of social reform and the utopian architecture at Brook Farm. All communities face the challenge of integrating ideal visions of the organization of space and the physical expressions of those visions, what Rappoport (1990) calls the “built environment.” The relations between the ideal and the real, however, are particularly visible in utopian societies where new experiments in living are self-consciously implemented (Tarlow 2002). In the case of Brook Farm, I am particularly interested in understanding how Transcendentalism and Fourierism were encoded in architecture and settlement pattern and how practices of inscription dynamically shaped the form and character of the community. This analysis, I argue, not only provides a new understanding of the daily lives of the members of the community, but it also offers a partial answer to the perennial question posed by historians as to why the community failed as a Fourierist Phalanx.

**Utopian Architecture**

The 19th century American utopian communities are well known for their explicit use of architecture as a semiotic medium to embody their beliefs and distinguish themselves from mainstream culture. This practice goes well beyond the standard use of architecture to signify meaning, since all details of utopian architecture are, in theory, governed by a single, coherent semiotic ideology. Architecture was, in many ways, the most visible material expression of the broader process of community self-representation. Utopian communities, however, faced persistent contradictions between the plans of their ideal community, usually supplied
by utopian theorists, and the actual realization of these plans in particular local contexts. In general, few communities were able to realize their ideal settlements due to the prohibitive financial costs. As a result, they tended to create vernacular expressions composed of a variety of architectural styles. This variety, however, was not a random choice of available styles, but rather a conscious selection that usually involved specific modifications appropriate for community needs.

Many utopian theorists provided detailed plans for their ideal communities (Hayden 1976:33–61). Robert Owen devised a plan based upon “parallelograms” and hired an architect, Stedman Whitwell, to prepare a model for presentation to President John Quincy Adams. Étienne Cabet provided architectural details for his city Icar. Charles Fourier, however, provided the most detailed plans of any utopian theorist. He designed entire landscapes of “passional attraction” consisting of Phalansteries, work areas, and gardens (Hayden 1976:150–155). Phalansteries were large unitary buildings flanked by symmetrical wings that enclosed a series of landscaped courtyards (Beecher 1990). These buildings were connected by interior streets, 18 or 24 feet wide, three stories high, called “galleries of association.” The galleries and courtyards were designed to encourage spontaneous meetings. The living quarters of the rich and poor were intermingled to provide an equitable distribution of social classes. Victor Considérant, a disciple of Fourier and an architect, drafted a plan of the ideal form of a Phalanstery, which was widely circulated among many utopian communities (Figure 8.1) (Beecher 2001). Several scholars have remarked on its striking similarities to the palace of Versailles (e.g., Hayden 1976:151).

The communal buildings constructed by North American utopian communities were imperfect realizations of the plans of the utopian theorists. Dolores Hayden (1976:49) has called these “intentional vernacular” architecture because they represented a pragmatic synthesis of literal Biblical imagery, visionary utopian ideals, and standard American and European building traditions. For example, none of the phalansteries built in the United States realized the model proposed by Fourier. The phalanstery built at the North American Phalanx resembled nothing more than a glorified boarding house (Figure 8.2). Some communities adopted architectural designs from pattern books on suburban housing and rural landscape (Hayden 1976:35). The Oneida Community, for example, drew inspiration from Andrew Jackson Downing and built Italianate facades adopted from his illustrations. The first Mormon Temple in Kirtland, Ohio was based upon a plate by Asher Benjamin. The Hopedale Community in Massachusetts built octagons based upon the plans of the phrenologist, Orson Squire Fowler.

Hayden (1976) has made an important distinction between authoritarian and participatory utopian communities. The former tend to be sectarian and the latter nonsectarian. Sectarian communities were often led by charismatic individuals
who wielded considerable power. Some legitimized their plans for the community as being God’s own design. Shaker leaders, for example, claimed that God revealed to them Millennial Laws regarding building. George Rapp asserted that an angel had shown him the plan of the Harmonist’s Economy church. Hayden (1976:40) notes that the most authoritarian sectarian groups produced the most coherent
architecture statements. However, these same groups also had the greatest difficulty managing doctrinaire vision and growth. Nonsectarian communities tended to make decisions by consensus. Although this process was slow, it created a sense of collective purpose. For example, the Oneida building program lasted over 30 years and was a material expression of the community’s stability.

In some cases, there was an explicit analogy drawn between the buildings and the community, such that the physical process of the building was identified with the process of spiritual growth and development (Hayden 1976:49). Among the Shakers, for example, the membership was addressed as the “living building.” When Joseph Meacham and Lucy Wright took over from Ann Lee and James Whittaker as the leading ministers of the United Society of Believers in 1787, they reorganized the Shakers into households called “families” composed of 30 to 100 people (Hayden 1976:67). These families were classified according to three categories – the novitiate, the junior order, and the senior order – and each community was to have at least one of each. Meacham characterized these families as a “living building” and linked their processual growth with the growth of the community (cited in Hayden 1976:68).

The Brook Farm Historical Site

The Brook Farm Historical Site extends from Baker Street (the old Dedham-Newton Road) to the Charles River in West Roxbury, Suffolk County, Massachusetts (Figure 8.3). At approximately 179 acres, it is the largest parcel of undeveloped land in the City of Boston. The site is bounded to the southwest by the Gardner Street landfill and Boston Conservation Commission land, to the northwest by the Newton town boundary and the Mount Lebanon cemetery, and to the southeast by the Veterans of Foreign Wars Parkway and St. Joseph’s Cemetery. Approximately 20 acres in the central portion of the property is owned and used by the Gethsemane Cemetery, originally founded in 1873 to support the Martin Luther Orphans Home and today is operated as a nonsectarian cemetery.

The site contains archaeological features and historical remains associated with at least nine discrete occupations. Major occupations include the famous utopian community, as well as the lesser known Native American, Ward farm, Ellis farm, Roxbury almshouse, Camp Andrew, Munroe boarding house, Lutheran orphanage, and the Brook Farm Home, a facility for emotionally disturbed youth (Table 8.2). The longest historic period occupation was the Martin Luther Orphans Home from 1871 to 1943. The site also contains valuable wetlands which serve as flood control for the Charles River and provide a habitat for birds and wildlife. Brook Farm received National Landmark recognition in 1965 and was declared
Table 8.2 Occcupational history of Brook Farm, West Roxbury, Massachusetts.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
<td>Archaic–1690</td>
</tr>
<tr>
<td>Ward Farm</td>
<td>1700–1780</td>
</tr>
<tr>
<td>Ellis Farm</td>
<td>1780–1840</td>
</tr>
<tr>
<td>Brook Farm Institute for Agriculture and Education</td>
<td>1842–1844</td>
</tr>
<tr>
<td>Brook Farm Phalanx</td>
<td>1844–1847</td>
</tr>
<tr>
<td>City of Roxbury Almshouse</td>
<td>1849–1855</td>
</tr>
<tr>
<td>Civil War Camp Andrew</td>
<td>1861</td>
</tr>
<tr>
<td>Munroe Boarding House</td>
<td>1869–1871</td>
</tr>
<tr>
<td>Martin Luther Orphans Home</td>
<td>1871–1943</td>
</tr>
<tr>
<td>Gesthemane Cemetery</td>
<td>1873–present</td>
</tr>
<tr>
<td>Brook Farm Home</td>
<td>1943–1974</td>
</tr>
<tr>
<td>Brook Farm National Landmark</td>
<td>1965–present</td>
</tr>
</tbody>
</table>

Figure 8.3 Location map of Brook Farm, West Roxbury, Massachusetts (Mitchell 1899:155).

Today, it is owned by the Metropolitan District Commission and operated as a park in the public interest.

The most famous of these occupations is the utopian community founded by George Ripley (Figure 8.4). George Ripley (1802–1880) was born in the Greenfield, Massachusetts to a modest family (Frothingham 1882). His father, Jerome Ripley,
was a local tavern owner. George graduated Harvard College in 1823 and Harvard Divinity School in 1826. In the latter year, he accepted the call to become the pastor of the Purchase Street Unitarian Church in Boston (Rose 1981). He soon proved himself an outspoken critic of orthodox church theology which he saw as overly concerned with arcane dogma and neglecting deeper philosophical and social issues. Taking matters into his own hands, he organized the Association for Mutual Improvement at his church. He also put forth his controversial ideas in his review of James Martineau’s *Rationale of Religious Inquiry* published in the *Christian Examiner* in 1836 and four years later debated Harvard Divinity School’s Andrews Norton on “The Latest Forms of Infidelity” (Frothingham 1876:123).

By January of 1841, Ripley’s disquietude had reached the point that he decided to resign from his Purchase Street ministry. His farewell address to his congregation is indicative of his state of mind, “I cannot witness the glaring inequality of condition and the hollow pretensions of pride, the scornful apathy which many urge the prostration of man, the burning zeal with which they run the race of selfish competition with no thought for the elevation of their brethren” (Rose 1981:104). Ripley proposed to found an alternative community, which would reestablish social relations upon a more natural foundation.
Ripley decided to locate his new community of reformers on a farm in West Roxbury, where he and his wife had summered in 1840. His goals are eloquently stated in a letter to Ralph Waldo Emerson:

Our objects, as you know, are to ensure a more natural union between intellectual and manual labor than now exists; to combine the thinker and the worker, as far as is possible, in the same individual; to guarantee the highest mental freedom by providing all with labor, adapted to their tastes and talents, and securing to them the fruits of their industry; to do away with the necessity of menial services, by opening the benefits of education and the profits of labor to all; and thus to prepare a society of liberal, intelligent, and cultivate persons, whose relations with each other would permit a more simple and wholesome life, than can be led amidst the pressure of our competitive institutions (Rose 1981:133).

On October 11, 1841, Ripley purchased Charles and Maria Ellis’s 170 acre farm for $10,500 (Swift 1900:19). A month later, he established the Brook Farm Institute for Agriculture and Education as a joint stock company and offered twenty-four shares at $500 apiece (Swift 1900). Stock was secured by the real estate which was held for the Association by four Trustees (Ripley, Charles Dana, Nathaniel Hawthorne, and William B. Allen) who served yearlong terms. Members were approved after a two-month probationary period and received five percent income from their shares which they were expected to reinvest by buying additional shares. The Institute took mortgages from the sinking fund of the Western Railroad Corporation and George Russell, Henry P. Sturgis, Francis Gould Shaw, and Lucy Cabott. Everyone was expected to share equally in labor to achieve economic self-sufficiency, and thus end “wage slavery” (Rose 1981:134). Those who were not inclined to work forfeited their income and risked expulsion. Tasks were to be rotated every two hours, so that no one individual could become a specialist. There was no religion test and house rent, food, fuel and clothing were offered at actual cost. Medical attention, use of library and public rooms was free.

Semiotic Ideologies of Social Reform

Semiotic ideologies are the basic frameworks for understanding the constitution of and interactions between specific categories of agents and social practices (Keane 2003:419). Although these ideologies may purport to be totalizing systems, they are never all encompassing. There are always aspects of the world that escape their purview and these have the capacity to challenge their legitimacy. During the occupation of Brook Farm, there were two dominant semiotic ideologies, Transcendentalism and Fourierism. In the former case, agenthood was based upon the
individual expressed in relation to nature, labor, equality, education, agriculture, industry, and divinity. In the latter, it was based upon the “new man,” conceived as an individual free to realize his or her full potential in connection with others by engaging in all spheres of life.

**Transcendentalism**

Transcendentalism can be defined as the belief in the intuitive perception of spiritual truth (Rose 1981:42). It possesses a close relationship to evangelical Unitarianism in that it is both an outgrowth from and critique of it. It also bears a strong debt to the French and German Romanticism. There is no definitive list of Transcendentalists, although Bronson Alcott, Orestes Brownson, William Henry Channing, John Dwight, Ralph Waldo Emerson, Margaret Fuller, Theodore Parker, Elizabeth Peabody, George Ripley, Sophia Ripley, and Henry David Thoreau must surely be counted as among its leaders. To understand Transcendentalism as a historical movement, it is necessary to ground it within its social context.

The shift from mercantile to industrial capitalism in the first half of the 19th century promised unrestricted growth and prosperity in the Northeast. Commercial and industrial expansion created new opportunities for speculation and profit. In the urban centers, however, ownership of property was dominated by elites. By 1840, the richest one percent of city dwellers owned 40 percent of all tangible property, with an even greater ownership of intangible property such as stocks and bonds (Henretta et al. 1987:331). One by-product of industrial capitalism was the rise of wage labor. This fundamentally new social relationship severed the ties between employer and employee, and household and workplace. Factory workers, for example, were no longer responsible for the entire production sequence, this knowledge instead being restricted to a few individuals. Handsman and Leone (1989) have argued that it is through this process of labor segmentation that one can find the source of the ideology of individualism.

The Unitarian church, itself a reaction to Orthodox revivalism, was founded upon three precepts, namely reason, intellectual freedom, and moral duty (Rose 1981:11). Individualism was valued insofar as it was grounded in this trinity. With the rise of social stratification engendered by the profits from industrialization, the appeal of Unitarianism began to erode. Increasing numbers of individuals strayed from the church and began to criticize it openly. Even among the elite there was sharp debate over whether religion was a way of life or just something to do on Sundays (Rose 1981:21). Members of the working class began to see their rights and interests as distinct from Christianity, which was increasingly viewed as a tool of class oppression (Rose 1981:26). This challenge to Unitarianism was met by the development of an evangelical movement within the church, which targeted
specific social ills. In 1834, the nine Unitarian churches of Boston united to sponsor missionary outreach to the poor.

The philosophers of this Evangelical Unitarian movement were known as the Transcendentalists (Rose 1981:38). They broke with Unitarianism on a number of important doctrinal issues. They denied the validity of miraculous proofs and questioned the blind reliance upon tradition. Instead, they argued that religious institutions are human constructs and that all individuals possess the possibility of intuitive perception of spiritual truths by virtue of the common endowment of a soul. This position was extended to Biblical exegesis. Borrowing interpretive methods from the German idealists, they argued that the Bible was a historical document written by human authors in a less than enlightened age. These radical moves alienated the Unitarian church by threatening its liturgical teachings and challenging the existence of the priesthood.

Ripley’s own unique contribution to this movement was to harness Transcendentalism as a theory for social reform. In 1841, he established the Brook Farm Association for Agriculture and Education to forge what he considered to be a more natural union between intellectual and manual labor by doing away with menial services and to provide the benefits of education and profits of labor to all. Ripley’s form of Transcendentalism is distinct from Emerson’s view, and it is significant that Emerson declined to become a member of the new community (Guarneri 1991:45). This reluctance seems to have been based on a disagreement regarding the relationship of the individual and society. In elevating the individual, Emerson argued that self-culture and self-education were prior to effective communal action. This philosophy was perhaps given its most idiosyncratic expression by Henry David Thoreau and his retreat to Walden Pond (Richardson 1986:56). In contrast, Ripley and the Brook Farmers felt that the ideal society could not be achieved by self-culture alone, but rather required the expression of individuality within a communal setting through immersion in the lives of others. The only other Transcendental experiment in communal living, Bronson Alcott’s Fruitlands, combined elements from both Ripley’s and Emerson’s philosophies with Alcott’s own puritanical devotion to self-sacrifice (Francis 1997).

The Brook Farm community was organized into four main “Directions.” Ripley, Minot Pratt, and Allen were elected to the General Direction. Hawthorne, Dana, and Allen were elected to the Direction of Finance. Allen, Pratt, and Ripley were elected to the Direction of Agriculture. Sophia W. Ripley, Dana, and Marianne Ripley were elected to the Direction of Education. In addition, Dana was elected recording secretary and Pratt the treasurer.

During its Transcendentalist phase, between 1841 and 1844, 32 individuals joined Brook Farm. According to Rose (1981:132), 27 people can be identified with reasonable certainty as to their professions – ten were ministers, teachers, and
writers and their wives, and six were former students. Nine were working people (mainly farmers) and only two were businessmen. Most of these individuals were from classes most receptive to ideas of reform and were bound together through ties of kinship and friendship (Rose 1981:133). George Ripley brought his sister and Sophia brought her cousin and niece.

Considerable emphasis was placed on individual growth through freedom to live according to one’s own conscience. Flexibility in work duties helped to ensure this. All members participated in farm work and household duties although the total number of work days was not to exceed 300. During this phase, records of individual work hours were apparently not kept. In the summer and spring months, leisure time was often spent outdoors in solitary rambles through the woods as described by Hawthorne in *The Blithedale Romance* or in group activities including musical soirees at the Eyrie, outings to Boston or West Roxbury town centers, dances, and masquerade parties.

**Fourierism**

Fourierism is the name of a short-lived social movement born in France and introduced into America in the 1840s (Brisbane 1840; Godwin 1844). It takes its name from its founder François Marie Charles Fourier (1772–1837), who as a youth was deeply affected by the French Revolution of 1789 (Figure 8.5). Fourier believed that conflict and suffering were the result of the perversion of natural human goodness by faulty social organization perpetuated by mercantile capitalism (Beecher 1990; Guarneri 1991). He developed a complex psychological theory of instinctive drives and devised a social blueprint with detailed instructions for the size, layout, and industrial organization of ideal communities he called Phalanxes, which accommodated innate differences in human personalities.

Fourier embedded his critique of capitalism within an elaborate theory of social evolution. For Fourier, human history was both progressive and regressive and is composed of 32 segments that can be subdivided into four phases (Beecher 1990). The first phase lasting 5,000 years is *Infancy*, or ascending incoherence, the second lasting 35,000 years is *Growth*, or ascending harmony, the third phase lasting 5,000 years is *Decline*, or descending harmony, and the final phase lasting 5,000 years is *Caudity*, or descending incoherence. He identified seven different stages within the Infancy phase. These are Confused Series, Savagery, Patriarchy, Barbarism, Civilization, Guarantism, and Simple Association. Significantly, these stages were defined in terms of the status of women. For example, Barbarism was characterized by the absolute servitude of women, Civilization was characterized by exclusive marriage and limited civil liberties of wives, and Guarantism was characterized by the development of an amorous corporation within which women would enjoy
considerable sexual freedom. Fourier does not appear to have been especially interested in the earlier phases of social evolution, and most of his writings focus upon the transition from Civilization to Harmony.

Fourier’s critique focused primarily on the institutions of commercial capitalism. For Fourier, the most egregious failing of civilization is its inability to resolve the problem of poverty. He notes ironically that poverty was most severe in the advanced societies saying that “the peoples of civilization see their wretchedness increase in direct proportion to the advance of industry” (Beecher 1990:197). He identifies three causes for the persistence of poverty. The first of these is wastefulness, or the inefficiency of capitalist methods of production and consumption. He singles out the French family farmer, observing that the use of communal plots, storage facilities, and kitchens would greatly reduce the amount of drudgery. The second cause is that production was uncontrolled and depended only on the profit motive. Because of competition among producers, overproduction periodically threw thousands of people out of work. The third cause is the inefficient use of human potential. This refers to the fact that the vast majority of workers were employed in jobs which were either redundant, or were a drain on the orderly
functioning of society. Fourier considered the merchant to be especially reprehensible and called him a parasite that only diverted capital from agriculture and industry.

According to Fourier, the root of these injustices was the repression of individual desires by existing social institutions. To resolve this issue, he developed his Theory of Passional Attraction, the idea that all human desires are governed by natural laws. He approached this problem from a positivistic philosophy and in his own mind made a scientific breakthrough on the order of Newton’s discovery of gravity, an analogy that he often employed. He defined passionate attraction as “the drive given us by nature prior to reflection, and it persists despite the oppression of reason, duty, prejudice, etc.” (Beecher 1990:225). Fourier identified 12 different passions growing from three branches of the tree of unityism. The Luxurious passions were the five senses (sight, smell, taste, touch, hearing); the Affective passions were love, friendship, ambition, familism; and the Distributive passions were cabalist, butterfly, and composite. These passions constitute the basic elements of Fourier’s social language, and his many writings are attempts to work out a passional grammar complete with its own syntax.

Fourier’s ideal community was called a Phalanx (Beecher 1990). It was to be composed of exactly 1,620 people, or twice the number of people necessary to ensure an adequate complement of the 810 passional personality types. Ideally, it was to be situated upon a square league of land in a rural setting and located within a day’s ride of a large city for easy access to a market. The site was to be relatively hilly with a stream, and possess soils and a climate suitable for the cultivation of a wide variety of crops. Dominating the Phalanx was the Phalanstery, a massive building adorned with colonnades, domes, and peristyles resembling a cross between a palace and a resort hotel. Symmetrical wings segregated workshops, music practice rooms, and playrooms (noisy activities) from visitor quarters, entertainment halls, and communications centers (less noisy activities). Two special architectural innovations were pioneered by Fourier, the use of special rooms reserved for work groups known as Seristries and covered street galleries linking the Phalanstery to adjacent buildings.

In America, Fourierism caught the imagination of numerous social reformers seeking to merge diverse social critiques into a coherent workable system. The “Age of Fourierism in America” was precipitated by Albert Brisbane, the idealistic son of a New York merchant who had been introduced to Fourier’s writings in 1833 while on a trip through Europe. Brisbane was so moved by what he read that he sought out Fourier for further instruction and became a convert. He writes that his sole goal in life was to “transmit the thought of Charles Fourier to my countrymen” (cited in Guarneri 1991:30). After a delay of several years due to illness, Brisbane took up the cause in earnest. In 1840, he published *The Social Destiny of Man,*
a translation of and commentary on Fourier’s thought (Brisbane 1840). He also enlisted the support of Horace Greeley, who was just beginning his newspaper career. In March 1842, Greeley sold Brisbane a front-page column in the New York Tribune and this became a vehicle for expounding the virtues of Fourierism.

The impact of Fourierism upon the Transcendentalists was initially slight. Reacting against its strict formalism, Ripley wrote in 1842 that he was not attracted to a science that “starts with definite rules for every possible case” (Rose 1981:143, note 88). This sentiment was echoed by Emerson, who wrote that “Fourier has skipped no fact but one, namely, Life” (cited in Cayton 1989:205). However, by 1843 it soon became clear that the organization of labor based upon voluntary measures was not working. Because of poor yields, the community was forced to take out additional mortgages and institute a retrenchment program. Ripley was thus searching for a way to increase productivity while being faithful to his desire to revalue intellectual and manual labor. The turning point was the Social Reform Convention held in Boston on December 27 and 28, 1843, a platform for Fourierist advocates which was heavily attended by Brook Farmers. In 1844, after considerable discussion, the community reincorporated themselves as the Brook Farm Phalanx, the second such phalanx in America. The immediate outcome of this was a dramatic influx of new members, most of whom were lower-class tradesmen and women (Guarneri 1985; Rose 1981:152).

The first steps toward transforming Brook Farm into a Fourierist community involved the reorganization of labor and the construction of a Phalanstery. Following the prescriptions of Fourier, the Brook Farmers instituted a work program of Series and Groups. Three primary series were established – the Agricultural, Mechanical, and Domestic Industries, each of which was subdivided into a number of groups. For example, the Domestic Series was composed of the Dormitory, Constitory, Kitchen, Washing, Ironing, and Mending Groups. The chief of each group was to be elected each week, and one of his or her main duties was to keep a record of the work done by each member of the group. Great emphasis was placed upon the interchangeability of work, so that any member that became bored with one task could easily transfer to another group.

In order to diversify industry, the community threw its membership open to the public to attract skilled laborers. Numerous people took up the invitation including six cordwainers, a gardener and his family, and a pewterer (Guarneri 1985). These individuals helped established new industries such as sash and blind manufacture, Britannia ware production, a tree nursery, greenhouse and shoemaking. The influx was so great that the new arrivals quickly outnumbered the original members. Guarneri’s (1985:71–72) analysis shows that fully 67 percent of the Brook Farmers were from artisan or blue-collar backgrounds. This mixture of social classes and ethnicities made for social tensions, hints of which are evident in the writings
of some members. Marianne Dwight probably echoed the sentiments of others when she blamed the failure of the community on the grounds of its catholicism. “We feel too, our brotherhood with those who have gone [left Brook Farm], but it always seemed to me a great mistake to admit coarse people upon the place” (Dwight 1928:162). For all their good intentions, Brook Farmers found that class lines were not easily bridged.

Due to the lack of specialized knowledge and experience and the limited availability of capital, the series and groups showed mixed results. The Carpentry Group acquired a less-than-distinguished reputation on the Boston market. It appears that the lumber that was used was not properly seasoned with the consequence that doors purchased from Brook Farm had an unfortunate tendency to warp and shrink (Swift 1900:43). The Cattle Group conducted a curious experiment in animal husbandry. Ripley tried to wean a calf by replacing milk with hay-tea. The calf died. The attempt by the Nursery Group to plant a large flower garden and sell flowers on the Boston market failed due to poor soil quality. Yet, even with this litany of setbacks, some groups were successful, and in 1844, the community turned a modest profit for the first time in its history (Rose 1981:150).

Finding Utopia

Steven Pendery, the Boston City Archaeologist, conducted the first archaeological research at Brook Farm as part of the Boston City Archaeology Program (BCAP) in 1990. At that time, none of the original buildings of the utopian community were standing and their original locations were unknown. In addition, there were several misconceptions about the identities of the extant historic period buildings. For example, the Martin Luther Orphan’s Home was popularly considered to have incorporated the Hive or to have been built on its foundations (Delano 1991; French 1971; Haraszti 1937; Schultz 1988; Sears 1912). The goals of Pendery’s research program were thus to locate and identify the specific archaeological resources of the project area, including the locations of the utopian period buildings (Pendery 1991).

Pendery adopted a testing methodology using 50-by-50 cm test pits located at five and ten meter intervals along a series of transects placed in likely site areas. In this manner, he identified one prehistoric site and eleven historic sites including the Knoll prehistoric site, the Knoll historic site, the Hive, the Hive outbuildings, the Barn, the Eyrie, the Cottage, the Pilgrim House, the Greenhouse, the Workshop, and the Phalanstery (Figure 8.6). In his report to the Massachusetts District Commission, Pendery (1991) concluded that the majority of the sites possessed high levels of archaeological integrity and that the utopian period sites
should be studied more intensively to generalize about the history of Brook Farm between 1841 and 1847.

In the summer of 1990, Pendery and I established the Brook Farm Hive Archaeology Project as a joint Boston City Archaeology Program and Harvard University research project. Our goals were to identify the Hive and resolve some of the confusions regarding its relationship to the Roxbury Almshouse and the Martin Luther Orphans Home. One popular view was that the Orphanage incorporated, with modifications, the original utopian period farmhouse (Delano 1991). However, Swift (1900:39) noted that the Hive burned down only a year after its use as an Almshouse, and that the Orphanage was erected partially upon its foundations.

In addition, there was evidence for the relocation of buildings on the site. During the early part of the Almshouse period, city documents record that $350 was paid to Mr. James Brown for “moving buildings,” but unfortunately do not identify which buildings were involved (Committee on Accounts of the Receipts and Expenditures of the City of Roxbury 1852). On the basis of similar floor dimensions, Pendery (1991) has speculated that the Pilgrim House may have been moved to the Hive area to serve as the main administrative building of the almshouse. This hypothesis is consistent with the empty cellar hole and lack of architectural debris at the original site of the Pilgrim House.

A third issue involves the number and configuration of the different wing additions to the Hive. Codman (1894:47) reported that “passing by the front of the house I found that two wings had been added to it in the rear, leaving shed and carriage room beneath.” Prior to excavation, the area southwest of the
Hive/Orphanage gave no surface indication of a cellar hole. However, there is evidence for a cellar hole to the north of the Hive/Orphanage foundation which some have identified as the utopian period wing (Schultz 1988). But this addition may possess a link with the utopian period of a different sort. Swift (1900:40) has reported that it was popularly believed that the utopian period Workshop was removed from its original location northwest of the Hive and repositioned to form the north annex of the Orphanage. There thus is some confusion as to the location of the wing.

Two main research objectives guided the excavation strategy. The first goal was to evaluate the integrity of the archaeological deposits in the vicinity of the Hive/Orphanage following up on the results of the BCAP testing program (Pendery 1991). Was it possible to differentiate between the historically known occupations? What material culture patterning might reflect the activities of the utopian community? The second goal was to address contradictions in the historical record by examining the existing foundations of the Orphanage. Does the Orphanage building in fact date to the utopian period or was it a more recent construction built upon the foundation of the Hive? How many wing additions were built and where were they located? Was there any evidence for the removal of the Workshop and its incorporation into the north annex of the Orphanage?

In our 1990 fall field season, we excavated a series of 1-by-1 m test pits in the backyard area of the Orphanage. Although none of the test pits in the targeted area yielded architectural remains, two units on the southern periphery produced unambiguous evidence for a house foundation. One contained deep layers of sand fill above a cobblestone floor, and another revealed a corner formed by the intersection of a brick and stone wall containing a loosely compacted brick and stone rubble fill also overlying a cobblestone floor. This feature proved to be the kitchen ell of the colonial farmhouse christened “the Hive” by the utopian community. During our 1991 summer field season, we further exposed the foundations of the Hive and determined that its dimensions closely corresponded with its description in the City of Roxbury inventory (Young et al. 1849).

During the summer and fall of 1992 the Brook Farm Project expanded archaeological testing at the Hive (Pendery and Preucel 1992). Our primary objectives were fourfold: (1) to understand the different building episodes of the Hive with special attention paid to the wing additions constructed during the utopian period, (2) to examine the relationship between the Hive and the Lutheran Print Shop which we thought could have been built on the foundations of the utopian period barn, (3) to discover contexts of utopian period material culture for use in making comparisons between the utopian community and non-commutarian groups or families, and (4) to examine the garden areas surrounding the Hive to reveal their role in signifying how the community envisioned nature.
Our results provide some clarification of the wing addition. The two wings discussed by Codman were likely contiguous, similar to those of a standard New England connected farm (Hubka 1984), and built in two separated episodes. Our testing in the area of Feature G provided unambiguous evidence for the fire that destroyed the Hive and almshouse on August 8, 1854 (Committee on Accounts of the Receipts and Expenditures of the City of Roxbury 1854:56). But contrary to our expectations, foundation footings for the southern wall of the wing were found in only one unit and all our attempts to locate other foundations failed. The testing of the Lutheran Print Shop foundation, although limited, is consistent with the interpretation that the Lutheran Print Shop was erected on part of the foundations of the original barn.

House Agency

Brook Farm never constituted a “living building” in the Shaker sense, and yet its houses were integral to the community’s self-understanding. In the following section, I explore the roles of the Brook Farm houses as social actors in mediating the contradictions between the semiotic ideologies of Transcendentalism and Fourierism. I suggest that the houses fostered specific interpersonal relations and engendered a durable commitment to Transcendentalism.

My method involves juxtaposing two sets of textual artifacts for greatest interpretive effect. The first text is a formal description of the houses based upon the inventory conducted by the city of Roxbury after the community was disbanded (Young et al. 1849). It is an instrumental account of the houses where they are conceived as inanimate resources with economic use value. The second group of texts consists of selected reminiscences by members of the Brook Farm community. These texts are richer, more evocative renderings that suggest each house had its own unique biography due to the habitual associations and memories of individual community members.

The Hive

In 1849, the city of Roxbury commissioned a special report on the buildings and grounds of Brook Farm to evaluate its potential as a site for the relocation of the city almshouse. The Hive is described as follows:

_The Mansion House_ (as designated by the Phalanx “the Hive”)

1st floor, 2 parlors: 1 large dining room, about 45 × 14, with closets: 1 kitchen, with Stimpson’s range, calculated for 60 to 80 persons: 3 large boilers (2 of copper and 1
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of iron): 1 large wash room: 1 press room, for pressing clothes: 1 store room, closets: privy: large shed, with accommodations for horses and vehicles: 2 rooms beyond shed.

2nd floor. 2 large chambers, with fire places: 2 bed rooms: 13 sleeping rooms, with several closets.
The attic. 50 × 18, plastered on sides, 4 ft. high.
Attic in original house, 40 × 20. There is a cellar under the original house (Young et al. 1849:16–17).

Here each room is itemized with respect to its size, existing condition (the plastered attic), and function (e.g., dining room, washroom, press room, sleeping rooms with closets). The report also identifies the capital resources present within the house, items such as the Stimpson range and the copper and iron boilers. The sizes of the two attics can be used to estimate that the first floor contained 1,700 sq.ft. The ell addition is 100 sq.ft. larger than the original house.

The utopian period texts, by contrast, reveal a more intimate picture. The farmhouse was the vital center of the new community and quickly received the sobriquet “the Hive.” It was here where all members ate their meals, where they received guests, where they did their laundry, and where they put on dances and theatrical performances for their mutual entertainment.

Amelia Russell describes the Hive as follows:

the Hive was a common-sized house with two rooms on either side of the front door and two others back of them. The front door was but little used, there being a more convenient one between the two rooms, on the side of the driveway or avenue, by which we always entered, being nearer the refectory, which was the back room on that side of the building. The front room was the common parlor for the dwellers in the house, and was also used for the reception of strangers. The rooms on the other side of the front door were occupied by a lady and her children. She was not an associate, but her sympathies united her with the members and she became a permanent boarder. Back of the dining-room was the kitchen, not large, and connected with it were the pantry and a room used for laundry, but rather circumscribed in its proportions. The chambers above were used as sleeping apartments for the inmates of the house, and as there were many residents at the Hive, I need not say no one could have the luxury of a separate room, excepting one scholar who was an invalid (Russell 1900:7–8).

This account indicates how the community used the Ellis farmhouse to meet its communal and private needs. Certain spaces, such as the south parlor, kitchen, pantry, and laundry, were defined as communal spaces. The central hall contained Ripley’s books and was used as the community library. Other spaces, such as the north parlor and the sleeping quarters on the second floor, were reserved for private uses. The north parlor was occupied by Mrs. Almira Barlow and her three sons.53
The sleeping quarters on the second floor included family suites such as those occupied by George and Sophia Ripley as well as barrack style accommodations for bachelors such as Isaac Hecker, the baker.

The first building project undertaken by the community was the enlargement of the Hive to accommodate students and the prospective members seeking to join Brook Farm. This project was the first attempt by the community to use architecture to materialize their communal beliefs. Russell writes:

> When we began to increase our numbers we had also to increase our accommodations; the Hive received many additions, and the existing interior was much altered. The front and back rooms were thrown into one, making a long and convenient dining-room. The kitchen was much enlarged, and the laundry appointments made suitable to our increased population (Russell 1900:8-9).

This account stresses the changes to the communal spaces which dramatically transformed the character of the original farmhouse. These included the creation of a large dining room, a large kitchen, and laundry appropriate for the new members and residents. Growth beyond the original founding members, many of whom were related to the Ripleys, was crucial to the legitimacy of the community.

The Eyrie

The description of the Eyrie in the city of Roxbury special report is as follows:

> The EYRIE (so designated by the Phalanx) This is a large building some 35 or 40 ft. sq. with out-houses attached.  
> *1st floor.* 2 large sq rooms: 4 small rooms  
> *2nd floor.* 8 bed rooms  
> Wood house, privy, cistern. There is a cellar under whole house, and furnace (Young et al. 1949:18).

The report describes the Eyrie as a square building with attached outhouses. It gives an account of the rooms by function. It also lists the outbuildings and associated features such as the woodshed, privy, and cistern. There is no discussion of architectural style.

According to the utopian texts, the Eyrie was constructed in March 1842 as a separate residence for the Ripley family and the boarding students attending the Brook Farm school (Delano 2004:77). It was the first freestanding building constructed by the community. Ripley set the house on the highest point of the property overlooking the farm, a practice strikingly reminiscent of that of a typical New England mill owner. The house was a two-and-a-half-story wooden structure
painted a light grey sandstone color and built in an Italianate villa style. It possessed low French windows that opened out onto a broad grassy terrace. The plan may have been taken from contemporary pattern books for rural architecture (see Downing 1850).

Russell describes the Eyrie as follows:

It was placed on a large rock, which formed the cellar and on two sides the foundation walls of the structure … As it was built on the top of this large, high rock, many steps were needed to reach the terrace in front of the door, on either side of which was a large room, one used as a parlor, the other as a library. Behind these rooms were four small dormitories. Above, I think they were not divided in the same manner, but a greater number of rooms was made of the space, leaving two rather larger than the others. Mr. and Mrs. Ripley occupied one of these, and the others were given to the scholars. At first the library was used as a recitation room, and I believe Mr. Ripley still continued so to use it even after we had regular school rooms (Russell 1900:17–18).

This account reveals how some of the original functions of the Hive were taken over by the Eyrie. Most obviously, Ripley shifted his residence to the Eyrie and installed his library in one of its parlors. The other parlor contained a piano where John Dwight held music lessons. The Eyrie thus became the main cultural center for the community. Its library was first used as a recitation room and then later as an entertainment center. Concerts were held in its music room and lectures were given in its parlor.

The Cottage

The special report describes the Cottage as follows:

The Cottage. This is a building of cottage form, 2 stories high.
1st floor. 2 large rooms: 2 smaller rooms: 1 wash room: 1 store room: cistern: privy
2nd floor. 4 chambers
There is a cellar under the house, and a furnace (Young et al. 1949:18).

This description provides another inventory of rooms and their functions. The outbuildings and associated features are identified as a washrum, storeroom, cistern, and privy. There is no discussion of its architectural style beyond noting its cottage form.

The utopian texts indicate that the Cottage was commissioned by Mrs. Anna Alvord in the autumn of 1842 (Delano 2004:95). It was located along the ridge west of the Eyrie and built in the Cottage style made popular by Andrew Jackson Downing. The Cottage was a brown two-story house shaped like a Maltese cross with the
central portion devoted to the staircase and four wings to individual rooms. This
design was not environmentally efficient since each room had three exposures.

The building’s primary function was to serve as a home to Mrs. Alvord. Since
she occupied only one room, the community allotted the other rooms to boarders
as needed. School was held in the parlor. The Cottage was later pressed into service
as a hospital during a smallpox outbreak.

Russell describes the Cottage as follows,

It was the next building erected after the Aerie, and was altogether the best finished
house on the place. The form was something like a Maltese cross, the centre being
devoted to the staircase and each of the four points containing a room. It was very
pretty to look at on the outside, but as three sides of each room were necessarily
exposed to the weather, the Cottage was warm in summer, and cold in winter,
picturesqueness having been more studied than commonplace comfort. Still it was a
very pleasant place to live in, bright and cheerful (Russell 1900:64-65).

This account links architectural aesthetics to quality of life. Russell notes that
the Cottage was the most attractive building in the community (“the best finished
house on the place,” “pretty to look at”). These attributes made it one of the
favorite places for members to stay (“a very pleasant place to live,” “bright and
cheerful”). When the community adopted Fourierism, the Cottage was chosen as
the appropriate place for the school because of the association of aesthetics with
education. “As it was decidedly the prettiest house on the place, it was thought
the youthful mind would be impressed by it and lessons become easier” (Russell
1900:63). When Russell (1900:63) was reassigned from the Cottage to the Pilgrim
house to make room for the school, she expressed regret, noting that she had
become attached to it.

During this period, cottages were popularly considered as an ideal style for rural
architecture because of their openness to nature (Downing 1842). The cottage
style was popular among several other Fourierist communities. Marcus Spring, for
example, built separate cottage style houses immediately opposite the phalansteries
at the North American Phalanx and at the Raritan Bay Union (Hayden 1976).
Significantly, Spring was an early nonresident stockholder in Brook Farm, so the
Brook Farm cottage may have even served as the source of his inspiration.

The Pilgrim House

The special report describes the Pilgrim House as follows:

Large Double House. (Designated by the communists - the Pilgrim House) this
building is 2 1/2 stories high, and built as a double house. Dimensions not accurately
ascertained, but thought to be about 40×35 with an L. It is so arranged that it is well adapted for a hospital.

1st floor. 4 large square rooms; 2 kitchens; 1 wash room, with large cistern under the same, and holding from 3 to 5000 gallons; 1 bakery: workshop; privy.

2nd floor. 9 chambers and bedrooms.

Attic. 4 large rooms.

Cellar under house, with furnace (Young et al. 1949:18).

For an unknown reason, this description is not based upon a formal survey (“dimensions not accurately ascertained”). It itemizes the rooms by function and identifies the various rooms that constitute the ell. Here there is a specific recommendation suggesting that Pilgrim House is well suited for use as the almshouse hospital.

The utopian texts reveal that the Pilgrim House was built by Ichabod Morton of Plymouth, Massachusetts in 1843 (Delano 2004:96). It was a large double house located on a ridge just southwest of the Cottage. Morton had hoped that his brother Edwin Morton and his family would join with him in the community. However, this did not happen and he only resided in the house for two weeks before deciding to leave. The house was then turned over to the community.

When the community took possession of the house, they immediately modified it to meet their communal needs. They tore down the walls between the two kitchens to create a spacious laundry room. They also constructed a large parlor by joining together the individual parlors of each house. This new room became the community’s ballroom. Russell writes,

Having originally been intended for two families, it had none of the quaint appearance of even a common country house. It was very much like two houses placed dos a dos instead of side by side, and was a very uncouth building, with many rooms in it which were useful for our increasing numbers, but did not satisfy an eye for symmetrical proportions. Among them were two large parlors, joined by folding doors, which became our ballroom whenever we were inclined for a dance, and were occupied on all convivial occasions (Russell 1900:56–57).

This account provides an aesthetic critique of the Pilgrim House. Russell notes that it was plain looking (“had none of the quaint appearance of even a common country house,” “a very uncouth building”) and was poorly designed (“did not satisfy an eye for symmetrical proportions”). Elsewhere she writes that “neither externally nor interiorly did it (the Pilgrim House) possess much attraction” (Russell 1900:57).

The Pilgrim House also housed the literary office of the Harbinger, the literary newspaper published by the Brook Farm Phalanx from 1845 to 1846 (Delano
The Harbinger was the direct heir to the Dial, Emerson’s Transcendentalist newspaper published in Concord which ceased publication in 1844, and the Phalanx, Brisbane’s Fourierist newspaper which ended a year later. It was devoted to issues of social reform and also contained translations, literary criticism, music and art criticism, and poetry. Especially notable are the writings of John Dwight, who is regarded as the father of modern music criticism. The paper itself was produced at the Workshop. By the fifth number of volume one of the Harbinger had a circulation of 1,000, although it is unlikely to have ever topped 2,000 (Swift 1900:267).

The Workshop

The special report describes the Workshop as follows:

Factory Building. 2 stories and attic. Length, 60×28.
1st floor. Room extreme length, (60×28)
2nd floor. 6 rooms.
Attic. 3 rooms.
A well of water which supplied the steam engine. Near this building is a corn barn (Young et al. 1949:17).

This description identifies the number of rooms in the Workshop, but provides no information on their uses. It does, however, note features (the well) and neighboring structures (the corn barn). It also omits an account of the Workshop’s architectural style.

The utopian texts indicate that the Workshop was a two-story, white clapboard building built in the spring of 1843. It initially housed the shoemaking industry and then, during the Fourierist period, provided space for the Britannia ware, sash and blind, and carpentry groups. The Printshop was also operated from the building. John Codman portrays it as follows:

The workshop which was being built at the time of my arrival, was two stories in height, sixty by forty feet in size, with a pitched roof, well lighted with windows, and situated some three hundred yards behind the Hive, in a northwesterly direction. At its further end, in the cellar, was placed a horse-mill, afterwards exchanged for a steam engine, that carried machinery for all departments of labor (Codman 1894:88–89).

There is a discrepancy in the size measurements provided by the Roxbury report and the Codman description. The former indicates 60 by 20 feet while the latter says that it was 60 by 40 feet. Codman may be in error since he also mistakes the distance between the Workshop and the Hive. ⁵⁵
Lewis Ryckman, a New York Fourierist, organized the shoemaking group and was quite successful (Francis 1997:93). George Hatch oversaw the sash and blind industry (Dwight 1928:109). There were apparently some irregularities in his bookkeeping. Ephraim Capen was in charge of the production of Britannia ware whale oil lamps, coffee pots, and teapots (Dwight 1928:78). The production run of these articles is undocumented and only a few examples are known today. A Brook Farm whale oil lamp is held in the collection of the Winterthur Museum (Figure 8.7). It is marked with the semicircular Brook Farm stamp (Figure 8.8).
Greenhouse

The Roxbury report described the Greenhouse as follows:

The Green House. This is, in main building, say 40×18 built of brick, with a wooden addition on one side, and end, making its dimensions, say 60×30. It is built in the usual form of green houses, and is well provided with green house furniture, such as stands and shelves for flowers and plants. There are two well-finished rooms, a very large room in the wooden addition, for the storage and deposit of fuel and such things as are necessarily attached to a green house. There are accommodations for obtaining and keeping water, and a furnace with the proper fixtures for heating the same, and warming the house. It is in good repair (Young et al. 1949:18–19).

Unlike the other accounts that are lists and counts, this description of the Greenhouse is written out. This shift in style donotes a more casual approach to the inventory. Indeed no firsthand measurements were taken and the dimensions presented are qualified by the word “say.” It describes the existing condition and available resources such as furniture, plant stands, and shelves.

According to the utopian texts, the Greenhouse was built in the autumn of 1844 with funds from Frank Shaw and located northwest of the Cottage (Dwight 1928:60, 109). It was overseen by Peter Kleinstrup and he and his family lived in an
adjacent room. The flower group used it to cultivate a variety of ornamental plants such as azaleas, camellias, geraniums, roses, violets, carnations, and heliotropes for sale on the Boston market.

Codman also lived in a room at the Greenhouse and described it as follows,

The new greenhouse was built in the autumn, just in time to save the plants from frost. It was situated back of the cottage and garden, almost parallel with our boundary wall, and about fifteen feet from it. There was a little sleeping room connected with it, where I lodged summer and winter. Above me in the gable, a variety of beautiful doves, consisting of Pouters, Tumblers, Ruffs, Carriers and Fantails, was installed. They were very tame, and were much admired by our family and visitors. They came at my call, alighted on my hands, head and shoulders, and picked corn from out of my hands and from between my lips (Codman 1894:131).

Here Codman reminisces fondly about his unusual living quarters and his playful activities with the doves. The carrier pigeons were used to send messages to and from Boston (Francis 1997:117).

Phalanstery

The Phalanstery was the only building constructed after the community reorganized as the Brook Farm Phalanx. There is no Roxbury city report since it burned down in a tragic fire on March 3, 1846, the very week it was due to be completed. There are no surviving plans of the building. Hayden (1976:173) has speculated that it likely served as the model for the phalanstery erected at the North American Phalanx in Red Bank, New Jersey (see Figure 8.2).

The Brook Farm phalanstery was a vernacular adaptation of a Fourierist phalanstery. The project was too large to be undertaken by the carpentry group alone and Ripley hired an architect, a Mr. Rodgers, and workmen (Dwight 1928:133). Ripley (1846:221) writes that although it was not a model for the unitary edifice of a Phalanx, it served the community’s present needs. Codman (1894:186) is somewhat less approving and indicates that it was called a phalanstery, “not that it resembled one, but more out of deference to the idea of one.”

Ripley describes the phalanstery as follows:

It was built of wood, one hundred and seventy-five feet long, three stories high, with spacious attics, divided into pleasant and convenient rooms for single persons. The second and third stories were divided into fourteen houses, independent of each other, with a parlor and three sleeping rooms in each, connected by piazza which ran the whole length of the building on both stories. The basement contained a large and commodious kitchen, a dining-hall capable of seating three to four hundred persons, two public saloons [salons], and a spacious hall or lecture room (Ripley 1846:221)
Ripley’s account reveals his desire to use architecture to signify the community’s commitment to Fourierism. The Phalanstery was designed to mediate the relation between the community and the individual, the public and the private. His use of the adjectives “spacious,” “large,” and “commodious” to describe communal spaces indicates the importance of communal gatherings as the very lifeblood of the community. He also, however, recognizes the need for privacy such as the independent houses reserved for families and describes rooms for single members as “pleasant” and “convenient.”

There was passionate debate about the construction of the phalanstery. Some members, like Ripley, saw it as the only way to achieve the goals of the community. Others, however, opposed it. Although Ripley’s views held sway, there remained an undercurrent of discontent. For example, immediately following the phalanstery fire, Marianne Dwight (1928:148) confesses: “I looked at the bare hill this morning, I must say, with a feeling of relief - there was an incumbrance gone. Heaven had interfered to prevent us from finishing that building so foolishly undertaken, so poorly built and planned, and which again and again some of us have thought and said we should rejoice to see blown away or burned down.”

The failure of the Phalanx

The failure of the Brook Farm Phalanx is usually attributed to two causes. The first is that it could not survive the blow to its economic base caused by the destruction of the phalanstery (Swift 1900). The phalanstery represented a substantial outlay of $7,500 but there was no insurance to help the community recover from its tragic loss. The second cause is the class tensions that emerged between members with the shift to Fourierism (Delano 2004; Guarneri 1991). These tension are clearly depicted in the diaries and letters of some of the members. Codman (1894:213), for example, observes that “the little, scarcely organized Community had increased into a godly number, so that its dining room was like a small hotel; and it was no longer held by the ‘Transcendentalists,’ but had become a portion of a large and increasing body of men who followed the wild ideas of a Frenchman named Fourier, and called itself the Brook Farm Phalanx.”

I suggest that another reason for the failure is the constitutive force of the architectural expression of the Transcendentalist ideology. The houses of Brook Farm developed their own distinctive personalities due to their unique functions and social associations. This “house agency” actively thwarted the attempts by Ripley and others to adopt Fourierism and make Brook Farm the leading Phalanx in America.

The strong emphasis on individualism is evident in a comment from Charles Lane, a disaffected member who left the community. Lane (1844:353) writes that
Brook Farm “is not a community: it is not truly an association: it is merely an aggregation of persons, and lacks that oneness of spirit, which is probably needful to make it of deep and lasting value to mankind.” At this time, the community consisted of a dispersed group of isolated residences linked together by the Hive, where common meals were taken. Each of the buildings was constructed in its own distinctive architectural style. From a Peircian perspective, this eclectic style can be seen as a rhematic indexical legisign since it indexes a commitment to individuality celebrated in Transcendentalist belief. The individual buildings are indexical sinsigns since they are tokens of the eclectic style. They also incorporate iconic sinsigns in that they closely resemble specific forms of rural architecture, such as those made popular by Andrew Jackson Downing. They were not exact copies, however, because none of the houses had their own kitchens. This familiar architecture would have domesticated the radical ideas of the community and made them more palatable for members and visitors alike.

The Brook Farm houses physically structured relationships between community members and their encounters with the natural environment. In this capacity, they are operating as rhematic indexical sinsigns since they regulate movements and activities that are specific to communal living. What is distinctive about Brook Farm is that its members typically interacted with multiple houses during the course of a single day. Marianne Dwight’s account is instructive in this regard:

Now my business is as follows (but perhaps liable to frequent change): I wait on the breakfast table [at the Hive] (1/2 hour), help M. A. Ripley clear away breakfast things, etc. (1 1/2 hour). Go into the dormitory group until eleven o’clock, — dress for dinner — then over to the Eyrie and sew till dinner time, — half past twelve. Then from half past one or two o’clock until 1/2 past five, I teach drawing at Pilgrim Hall and sew in the Eyrie. At 1/2 past five go down to the Hive, to help set the tea table, and afterwards I wash teacups, etc., till about 1/2 past seven. Thus I make a long day of it, but alternation of work and pleasant company and chats make it pleasant (Dwight 1928:7–8).

Fourierism, by contrast, specified a radically different housing situation. According to Fourier’s model of an ideal community, the entire community was to be housed together in a phalanstery. The Brook Farm phalanstery was built to proclaim the shift to Fourierism and thus functioned as a dicent indexical sinsign. It was interpreted by members of the community as publicly marking the commitment to a new kind of community. Yet, it had clear implications for the existing housing stock. Ideally, the original buildings should have been removed to make room for the new phalansterian landscape. However, Russell (1900:91–92) notes that “it was not thought advisable to give up entirely the other houses, but still keep them as they were, feeling that the numbers who would undoubtedly join us
would need accommodation.” The implications of this decision for creating a set of new social tensions between the existing members and the new arrivals went unrealized due to the phalanstery fire.

Charles Crowe (1959:495) has suggested that the shift to Fourierism was not the result of a conscious desire to abandon Emersonian individualism. Rather, Ripley sought to merge the two philosophies together in order to achieve the goals of a new socialist society. Ripley believed that the Fourierist Phalanx was the means to create a Transcendentalist “heaven on earth.” In such a community, social relations would be “in perfect unison with the nature of man; to which every chord in his sensitive and finely vibrated frame will respond; which will call forth as from a well tuned instrument, all those exquisite modulations of feeling and intellect, which were aptly termed by Plato, the ‘music of his being’” (Ripley 1847:137). The Transcendentalist language of this statement is striking.

An example of house agency mediating the relationship of Transcendentalism and Fourierism is the celebration of Fourier’s birthday on April 7th, 1845 (Anonymous 1845:336–337, Dwight 1928:89). The Hive was chosen as the appropriate setting. The ceilings and walls of the dining hall were draped with evergreens and the tables were set with flowers from the greenhouse. A plaster bust of Fourier with a myrtle wreath was placed at one end of the hall. On the wall behind it, the name Fourier was spelled out in evergreen branches. On each side of the inscription were a beehive and an anchor, the emblems of Industry and Hope respectively. At the opposite end of the room, the banner of the association composed of the primary colors was hung. Over the banner was placed a blue plaque which contained the words UNIVERSAL UNITY in silvery white letters. A Lyre, representing the seven spiritual passions, was placed on one side of the room and an inscription from the New Testament proclaiming the promise of the Lord and the prophesies of heaven on earth on the other. Another plaque was inscribed with Fourier’s fundamental law, _Les Attractions sont proportionelle aux Destinees_. The rich semiotic ornamentation of the room simultaneously indexed Fourier and his philosophy, as well as nature and Transcendentalism.

Representing Brook Farm

Two oil paintings of Brook Farm are known to have been produced during the community’s existence. Both of these were painted by Josiah Wolcott and are currently held by the Massachusetts Historical Society in Boston. Wolcott was a little known ornamental and portrait painter who apprenticed as a chair painter in Boston in the 1830s and then trained in fine art with Thomas Doughty (Osgood 1998). He received a diploma from the Massachusetts Charitable Mechanic Association
certifying exemplary conduct and ability in 1835. Two years later, three of his landscape paintings were selected for inclusion in the Boston Athenaeum exhibition. In that same year, he listed himself in the Boston city directory as a painter. He married Mary B. Phinney in 1838 and, due to the need to support a family, turned to decorative painting. He began listing himself as a chair painter in 1839 and then as a sign and ornamental painter in 1843.

Walcott became deeply interested in the social issues of his time, particularly Fourierism. In the winter of 1843, he attended the Social Reform Convention held at the Tremont Temple in Boston. It is here that he may have met some of the members of Brook Farm. Enthusiasm was so great that the New England Fourier society was founded and Walcott was elected to its executive committee. Walcott purchased shares in the Brook Farm community in November of 1844 and again in April, July, and October of 1845 (Osgood 1998:30, Note 29). Osgood (1998:12) has speculated that he was planning to join the community with his wife and new son, George, after the completion of the Phalanstery.

Walcott’s first painting, dated 1843, depicts Brook Farm as an idyllic community (Figure 8.9). It includes representations of the Hive and barn, the Eyrie, the Cottage, and the Pilgrim House set in a pleasant rolling landscape and beneath a double rainbow. The painting is executed in bright colors in a romantic effect. Osgood (1998) has compared the renderings of the buildings against their published descriptions and concluded that they are quite accurate. The painting thus captures the spirit of the community during the end of its Transcendentalist phase.

Figure 8.9 Brook Farm, oil painting by Josiah Walcott, dated 1843 (courtesy of the Massachusetts Historical Society and Mrs. Robert Watson).
Wolcott’s second painting, undated, is a darker, more somber depiction of the community (Figure 8.10). It includes all of the buildings shown in the previous painting with the addition of the Workshop (behind the Hive) and the foundations of the Phalanstery (in front of the Eyrie). There is a bright glow in the sky, perhaps indicating sunrise. The standard interpretation is that it was painted in 1844. However, it seems more likely that it was painted after the destruction of the Phalanstery in 1846. In this case, the painting would depict the Phalanstery in ruins. This interpretation is lent some support by two statements by members of the community. A day after the fire, Marianne Dwight wrote that “a part of the stone foundation stands like a row of gravestones – a tomb of the Phalanstery – thank God, not a tomb of our hopes!” (Dwight 1928:148). The depiction of the phalanstery does resemble gravestones. In addition, Rebecca Codman Butterfield, whose family owned the painting, stated that it was painted “about 1846, by Josiah Wolcott, one of our members” (cited in Myerson 1978:290). The painting would then represent the community during the latter part of its Fourierist phase.

In all the publications on Brook Farm, no scholar has thought to ask why the paintings were made. The likely answer is the need to have visual imagery to illustrate public lectures on Fourierism and the Brook Farm community. One of the ongoing challenges of Brook Farm was to raise funds to support the community and to disseminate its utopian philosophies. The primary means of accomplishing this was by members of the community going on the lecture circuit. George Ripley, Charles Dana, and John Dwight all traveled throughout the northeast
giving public lectures and visiting other utopian communities (Dwight 1928:127, 160). The two Walcott paintings were probably commissioned for this purpose. As dicent indexical sinsigns incorporating rhematic iconic sinsigns, they would have contextualized the lectures of the Brook Farmers and given them a material reality necessary in a public forum where rival utopian theories were also being discussed. The 1843 painting would have introduced an audience to the physical form of the community and emphasized its intimate relationship to nature. The 1846 painting would have demonstrated that the community had withstood the loss of the Phalanstery and was confidently moving forward into the future.

Conclusions

Much of the literature on Brook Farm has focused on why the community adopted Fourierism and why the social experiment failed (Swift 1900, Miller 1950). The standard arguments have identified the economic loss posed by the destruction of the phalanstery and the class tensions caused by the influx tradesmen and women. This is what Delano (2004) has called the “dark side of utopia.” There is no question that these factors were important. However, it can also be argued that house agency played a central and guiding role. The community never fully embraced Fourierism and there was never a conscious desire to abandon Transcendental individualism for Fourierist communitarianism (Crowe 1959:495). This persistence of Transcendentalism, however, posed an ideological contradiction that, in the end, was only resolved by the disbanding of the community.

Transcendentalism was above all else an extremely flexible doctrine, one that tolerated a considerable degree of latitude among its followers. The same critiques of industrial capitalism grounded in Evangelical Unitarian values that inspired Brook Farm also inspired Bronson Alcott’s consocial family at Fruitlands and Thoreau’s isolation at Walden Pond (Francis 1997). There is a sense of intellectual bricolage underlying the movement where ideas from German Idealists, British Romantics, and French Reformers are all mixed together with a dash of New England pietism thrown in for good measure. At Brook Farm this “working things out as they go” philosophy signified a commitment to egalitarianism where individual self-fulfillment could only be achieved through engagement within a social group.

Fourierism, by contrast, was a much more rigid, authoritarian system that specified all aspects of the ideal society even down to appropriate sexual partners. This aspect of Fourierism, and indeed other controversial elements, were carefully edited out for an American audience by Albert Brisbane and Parke Godwin resulting in a translation that retained the strength of Fourier’s vision, but lacked many of his psychological insights. The expurgated version was well received and served as
a social blueprint for the two dozen Fourierist phalanxes founded across the United States. This “sacred text” meant that there was much less leeway for experimenting with social relations. Especially problematic was the question of class that Fourier regarded as a natural condition of human existence. At almost all American phalanxes tensions developed externally between wealthy absentee stockholders and resident members, and internally between lower-class tradespeople and the “aristocratic element” (Hayden 1976).

The buildings used and constructed during the Transcendentalist phase are characterized by diverse architectural styles. The Hive was enlarged by a large wing extending from the kitchen ell, which dwarfed the original farmhouse. The Eyrie was built in an Italianate villa style complete with low French windows, a decorative cornice, and terracing. The Cottage was a rural gothic structure with four gables and a central stairway. The Pilgrim House was a double house of the classical revival type. This variety was a material expression of the Transcendentalist celebration of the individual in society. And yet, the buildings were more than a reflection of this ideology. They actively engendered certain habits of thought and social practices at the core of Transcendentalism.

We can now return to the question of why the community abandoned its Transcendentalist principles and adopted Fourierism. The evidence suggests that Transcendentalism was never intentionally abandoned and, indeed, it coexisted alongside Fourierism. The housing stock built during the Transcendentalist period and its distinctive use by the community mediated tensions between individual and community, public and private, manual and intellectual labor. The houses acquired compelling biographies derived from the people who lived in them and the activities they housed. George Ripley expresses his emotional connection to the houses as follows: “We could not part with either of the houses in which we have lived at Brook Farm, without a sadness like that which we should feel at the departure of a bosom friend” (cited in Codman 1894:196). He then reveals that the community did not feel the same sentiment toward the phalanstery. “The house was not endeared to us by any grateful recollections; the tender and hallowed associations of home had not yet begun to cluster around it, and although we looked upon it with joy and hope as destined to occupy an important sphere in the social movement to which it was consecrated, its destruction does not rend asunder those sacred ties which bind us to the dwellings that have thus far been the scene of our toils and of our satisfactions” (cited in Codman 1894:195–196).
CHAPTER 9

In the Aftermath of the Pueblo Revolt

The Pueblo Revolt marked the beginning of the most intensive period of cultural revitalization undertaken by the Pueblos thus far in historic times. The period between 1680 and 1696 was also one in which occurred the greatest dislocations and mass movements of Pueblo people in historic times. If the Pueblos by this time still did not share a sense of cultural similarity, they certainly shared at least a sense of common historical destiny.

Alfonso Ortiz (1994:300)

On August 10, 1680, the Pueblo Indians of the province of New Mexico and their Navajo and Apache allies united in an armed revolt to drive the Spanish colonists from their homelands (Hackett and Shelby 1942; Knaut 1995; Preucel 2002). Pueblo warriors executed Franciscan priests and Hispanic settlers, burned missions and haciendas, and laid siege to the Spanish capital of Santa Fe. The colonists who survived this onslaught fled south to El Paso del Norte (present day Ciudad Juárez, Mexico), where they temporarily reestablished their colony. The Pueblo Revolt of 1680 was the earliest and most successful native insurrection along the northern Spanish frontier and, for a period of 12 years, the Pueblo Indians lived free of Spanish domination.

The 20-year period immediately following the revolt witnessed a dramatic diaspora at a scale never before seen in the Southwest (Barrett 2002; Liebmann et al. 2005; Ortiz 1994). Prior to 1680, Pueblo peoples were concentrated into mission villages and visitas as part of the Franciscan missionary program (Figure 9.1). Most of these villages were founded long before the arrival of the Spaniards and had been converted into missions through the establishment of mission churches and conventos (Espinosa 1988). After the revolt, some eastern Pueblo districts were
entirely vacated with people taking refuge among the Hopi, Zuni, and Navajo. For example, some Tiwa and Tewa peoples left their Rio Grande homes and established the villages of Payupki and Hano on the Hopi mesas (Brandt 1979:345; Dozier 1966:1).

More commonly, districts were reorganized and new villages were constructed in defensive locations, often on the tops of high mesas. The Hopi established several villages on First and Second Mesa (Brew 1979:522). The Zuni built a village on Corn mountain (Dowa Yalanne) (Ferguson 1996). The Tewa, Keres, and Jemez people built villages on the mesas in the Northern Rio Grande district (Ferguson and Preucel 2005; Liebmann et al. 2005). Most of these new villages were short-lived, however. After putting down the second revolt of 1696 (Jones 1989), the Spaniards encouraged the Pueblo people to move back down to their mission villages and, with the exception of Acoma and Hopi, all complied.

In this chapter, I offer a new interpretation of the social practices underlying the Pueblo Revolt of 1680. The standard interpretation of the revolt is that it was a cultural revitalization movement (Gutiérrez 1991; Ortiz 1994; Reff 1995). Few studies, however, have examined how the movement took shape and how it circulated among Pueblo people. My research identifies the specific semiotic modalities central to establishing political alliances and forging consensus among rival factions. In particular, my study reveals that Pueblo leaders deployed rhetoric, architecture, site location, and ceramics as mutually supporting indexical icons to create and legitimize a new semiotic ideology. As my case study, I focus on Kotyiti Pueblo, an ancestral Cochiti village that attracted refugees from several other Rio Grande villages. I then consider the social practices that enabled the revitalization movement to circulate among other Pueblo Indian communities throughout New Mexico.
The New Mexico Colony

The New Mexico colony was established as a part of the viceroyalty of New Spain in 1598 (Espinosa 1988). Like Mexico, it was a class-based society where power and privilege were ultimately derived from the King of Spain. First among the colonists was the governor who was appointed by the viceroy from a wealthy Spanish family, usually as a political favor. This favor was more honorific than remunerative and governors often ended up paying for their expenses out of their own pocket.

The settlers were composed of two groups, the encomenderos, titled individuals with rights to tribute from Pueblos, and the moradores, low-class individuals without such rights, often including criminals and profiteers (Gutiérrez 1991:102). The encomienda system was basically a feudal system crafted to meet the exigencies of the New World (Barber 1932). It was defined as tribute to be assessed on each Indian household by the encomendero. Tribute was collected twice a year, usually in May and October in the form of cloth, hides, and maize. In practice, many Pueblo families were unable to meet their assessed tribute and were thus forced to provide labor in what amounted to forced slavery.

Running parallel to and, sometimes, in sharp conflict with the civil administration was the ecclesiastical authority of the Franciscan mission (Scholes 1942). Although Franciscan missionaries had accompanied several of the early entrañas, the establishment of New Mexico as a mission field occurred only after 1609 (Espinosa 1988:14). By 1616, there were nine mission centers established at the pueblos of San Ildefonso, Nambé, Galisteo, San Lazaro, Santo Domingo, Zia, Sandia, Isleta, and Chilili and visitas at four others (Espinosa 1988:18). At the time of the Revolt of 1680, there were 39 Christianized pueblos (Escalante in Twic Mell 1914:269). Each mission was established in close proximity to a pueblo village and contained a church, convento, workshops, stables, and farmland. Most of the missions had only a single friar who was assisted by 20 or so natives who served as porters, sacristans, cooks, and bell ringers (Espinosa 1988:22). The mission economy depended upon agriculture, livestock, and, to a limited degree, commerce.

By the middle of 17th century, the Southwest was increasingly incorporated into a political economy dominated by rivalries between the Spanish civil authority and ecclesiastical authority. Although geographically extensive, this system was extremely fragile. Abuses by encomenderos and friars alike caused considerable unrest within Pueblo communities and they began to cleave into pro- and anti-Spanish factions. For example, at Pecos Pueblo, deep divisions emerged as one segment warned the Spaniards of the impending Revolt of 1680 while another actively participated in the attack on Santa Fe (Kessell 1979:232). Animosity was
particularly strong between the rebels and the Christian converts. The latter posed a severe threat to the leaders of the revolt by publicly repudiating traditional Pueblo beliefs and customs and by providing military aid to the Spaniards in their reduction campaigns (Jones 1966).

The Pueblo Revitalization Movement

The Pueblo Revolt of 1680 has often been interpreted as a cultural revitalization movement led by Popay, a ritual leader from San Juan Pueblo (Liebmann 2006; Ortiz 1994; Preucel 2000a; Reff 1995; Wilcox 1981). According to Anthony Wallace (1956:265), a revitalization movement is “a deliberate, organized, conscious effort by members of a society to construct a more satisfying culture.” It differs from other processes of cultural change, such as evolution, drift, diffusion, and historical change, in that it is the result of the deliberate intent of a people in response to some stress. Wallace identifies a series of subclasses of revitalization movements including nativistic, revivalistic, cargo cult, vitalistic, millenarian, and messianic movements. He suggests that they are recurrent features of human history and thus of profound historical significance.

Wallace (1956:268–270) identifies the revitalization process as consisting of a series of five overlapping stages. The first stage is steady state with cultures existing in equilibrium. Stress is managed by standard stress-reducing techniques. The second stage is the period of individual stress. During this period, a definable social group experiences increasingly severe stress as a result of the failure of existing stress-reducing techniques. The third stage is the period of cultural distortion. This is when a culture becomes internally distorted due to individual variation in response to stress which, in turn, causes stress levels to increase. The fourth stage is the period of revitalization. Wallace suggests that revitalization movements, often religious and led by a charismatic leader, must perform six major tasks: (1) worldview reformulation, (2) communication as the prophet preaches revelations to a following, (3) organization as a new social order is established composed of the prophet, disciples, and followers, (4) adaptation as the movement develops strategies to make it more acceptable to special interest groups, (5) cultural transformation as the entire population comes to accept the new movement, and (6) routinization as it becomes established as normal across social and political institutions. The sixth stage is the new steady state. This is when cultural transformation has been fully accomplished and the movement has become routinized.

The Pueblo revitalization movement combined aspects of messianism, nativism, and revivalism (Liebmann 2006; Preucel 2000a). The messianic component of the Pueblo revitalization movement is perhaps the least well developed of the three.
Messianic movements usually “emphasize the participation of a divine savior in human flesh” (Wallace 1956:267). Several ethnohistoric accounts describe the role of supernatural intermediaries in the planning of the revolt. One account identifies three deities, Caudi, Tilini, and Tleume, that appeared to Popay in a Taos kiva (Hackett and Shelby 1942b:247). These beings instructed Popay to make a knotted cord of maguey fiber (un mecate de palmilla), with the knots signifying the days to wait before the rebellion, and to circulate it among the pueblos. Popay, however, is unlikely to have been a true “messiah.” He is characterized as a sorcerer (hechicero) in the Spanish documents and this probably corresponds to a medicine society leader (Ortiz 1980). This position is one of several important ritual positions in pueblo society. In contemporary and ethnographically recorded Pueblo society, ritual leaders are not considered divine.

The nativistic component of the movement, in contrast, is well in evidence. Nativism is expressed by “a strong emphasis on the elimination of alien persons, customs, values or material from (a people’s worldview)” (Wallace 1956:267). Immediately following the revolt, Popay and his associates conducted a formal inspection tour of the Pueblo villages. At each one, they demanded that the people eradicate every trace of Christianity. They were instructed to “break up and burn the images of the holy Christ, the Virgin Mary and the other saints, the crosses … burn the temples, break up the bells, and separate from the wives whom God had given them in marriage and take those whom they desired” (Hackett and Shelby 1942b:247). To purify themselves, they were to plunge “into the rivers and washing themselves with amole (yucca root) … with the understanding that there would thus be taken from them the character of the holy sacraments” (Hackett and Shelby 1942b:247).

There was also a strong revivalistic character to the movement. Revivalism emphasizes “the institution of customs, values, and even aspects of nature which are thought to have been in the (worldview) of previous generations but are not now present” (Wallace 1956:267). During the inspection tour, Popay and his associates urged the Pueblo people to renew their kivas, reestablish their plaza shrines, and hold their katchina ceremonies. “For their churches, they placed on the four sides and in the center of the plaza some small circular enclosures of stone where they went to offer flour, feathers, and the seed of the maguey, maize, and tobacco, and performed other superstitious rites, giving the children to understand that they must all do this in the future” (Hackett and Shelby 1942b:240).

The Pueblo Revolt of 1680 should be understood as part of a long-term indigenous resistance to Spanish authority that encompasses the Tepehuan Revolt of 1616 and the Tarahumara Revolts of 1648–1652 and 1680–1690 in Nueva Vizcaya. The earliest documentary evidence of revolt activity in New Mexico is Viceroy Luis de Velasco’s account in 1609. He noted that “some of the pueblos and nations are on
the frontiers of the Apaches, who are usually a refuge and shelter for our enemies, and there they hold meetings and consultations, hatch their plots against the whole land, and set out to plunder and make war” (Hammond and Rey 1953:1089). These pueblos included the Picuris, Taos, and Pecos, who had allied with the Apaches and “Vaqueros” (Hammond and Rey 1953:1094). Here we see the beginnings of a strategy that was to characterize almost all subsequent revolt attempts, namely the establishment of confederations with non-Pueblo peoples, and the seeking of refuge at the edge of the Spanish rule.

In 1616, the Tepehuan people of Nueva Vizcaya revolted and 200 Spaniards were killed over a period of four years (Gradie 2000). Charlotte Gradie (2000:167) has interpreted this revolt as a cultural revitalization movement. She suggests that the Jesuit missionaries caused social stress by forcing people to leave their rancherias and congregate in mission villages. They also required the traditional beliefs and customs to be replaced by Christianity and this fostered animosities not only between the Tepehuan people and Spaniards, but also among Tepehuan converts and traditionalists. In this context, Quautlatas emerged as a charismatic leader and called for the return of the old ways. Favoring the Spanish title “bishop,” he preached in the style of the Jesuits.

Beginning in 1623 and lasting some 16 years, several individual Pueblo villages in New Mexico revolted. Significantly, they were all located at the boundaries of Spanish control. In 1623, Jemez Pueblo rose up and fled to their mountain villages (Hodge et al. 1945:276). In February 1632, Zuni Pueblo rose up during mass and killed Fray Francisco Letrado (Hodge et al. 1945:78). They then took temporary refuge on Dowa Yalanne (Bandelier 1890:134; Ferguson 1996:29). In December 1639, the people of Taos Pueblo rebelled and killed Fray Pedro de Miranda and two Spanish settlers (Scholes 1936:320).

From 1640 to 1642, the church and state were embroiled in a serious jurisdictional dispute (Bancroft 1962:166–167). Governor Fernando de Argüello held that the friars had assumed extraordinary and absolute powers as officials of the inquisition and even accused them of fomenting a revolt. This dispute escalated to the point that Governor Luis de Rosas was murdered in 1641 or 1642. Another revolt attempt took place in 1645 under the second governorship of Argüello (Bancroft 1962:167; Davis 1857:133). The immediate cause of this revolt was the whipping and hanging of 40 Indians who had been accused of idolatry. The conspiracy was discovered and quickly put down.

Another attempt occurred in 1650 during the governorship of Hernando de Ugarte y la Concha (1649–1653). This was planned by a confederation of people from Isleta, Alameda, San Felipe, Cochiti, and Jemez Pueblos working closely with the Apache. “[I]n the year 1650, during the government of General Concha, he discovered another plot to rebel which the sorcerers and chief men of the pueblos
had arranged with the enemy Apaches” (Hackett and Shelby 1942(2):299). The Pueblos planned to kill the soldiers and friars on Thursday night of Holy Week when they were in church (Bancroft 1962:168; John 1996:88). However, Captain Vaca discovered the plot when he noticed unusual activity with the horse herd. Nine leaders were hanged and many others sold into slavery for a period of ten years.

A third revolt, explicitly modeled on the 1650 attempt, was planned during the administration of Fernando de Villanueva (1665–1668). The leader was Esteban Clemente, the governor of the Tiwa and Tompiro pueblos in the Salinas district. Clemente had previously held an important role for the Spaniards in overseeing trade with the Apache and various Plains Indian groups (Kessell 1980). As with the 1650 revolt, the Thursday night of Passion Week was selected as the date of uprising, and the Indians were to seize the horses to prevent the escape of the Spaniards (Davis 1857:134). “Just as they had plotted during the government of General Concha, they must destroy the whole body of Christians, not leaving a single religious or Spaniard” (Hackett and Shelby 1942b:300). The conspiracy was discovered, but not before five Spaniards were killed (Bancroft 1962:168). Clemente was captured and executed. These accounts of revolts organized by individual pueblos and multi-pueblo alliances reveal the depths of the Pueblo resistance to Spanish rule. The Pueblo Revolt of 1680 thus was not unique and was exceptional only in its successful outcome.

Considerable historical research has focused on Popay as the leader of the Pueblo Revolt of 1680 (Beninato 1990; Sando and Agoyo 2005; Weber 1999). This attribution is based upon testimony given to Otermín by Indian informants and prisoners captured during his unsuccessful reconquest bid of 1681. For example, one informant reported, “[w]hat they had done had been because of a Teguas (Tewa) Indian named El Popé, who had made them all crazy and was like a whirlwind” (Hackett and Shelby 1942b:295).

But other ethnohistorical accounts, less frequently cited, but from the same context, reveal the names of several other Pueblo leaders. One informant identified the instigators of the rebellion as four leaders, “two Indians of San Juan, one named El Popé and the other El Taqu, and another from Taos named Saca, and another from San Ildefonso named Francisco” (Hackett and Shelby 1942b:239). Another testified that the four leaders were Popé, Chaca (Xaca) of Taos, (Alonzo) Catiti, and Francisco Tanjete (Sanchez 1983:146). These lists match closely with the exception that El Taqu of San Juan is mentioned in the former and Alonzo Catiti of Santo Domingo is mentioned in the latter.

These accounts strongly suggest that the 1680 revolt was the product of an alliance between the Tewa, Tiwa, and Keres and they lend considerable credibility to the idea that the revolt was carefully planned, not by a single individual, but by an elite cadre likely composed of medicine society leaders and war chiefs
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(Beninato 1990). Sando (1979:195) has suggested that they held meetings at different villages at the homes of war chiefs during the feast days of the village’s patron saint in order to hide their activities from the Spaniards.

One immediate question is how did the Pueblo leaders persuade people to participate in armed resistance against the Spaniards. It is clear from the ethnohistoric accounts that the primary means was by a publicly articulated revitalization discourse. According to Pedro Nanboa of San Felipe Pueblo, “the resentment which all the Indians have in their hearts has been so strong, from the time the kingdom was discovered because the religious and the Spaniards took away their idols and forbade their sorceries and idolatries; that they have inherited successively from their old men the things pertaining to their ancient customs; and that he has heard this resentment spoken of since he was of an age to understand” (Hackett and Shelby 1942a:61, my emphasis). This statement is evidence for the deep roots of the Pueblo resistance since, at the time of his deposition, Namboa was an old man in his eighties.

The reaction to this discourse was mixed. Some villages eagerly accepted Popay’s directives and made preparations to fight the Spaniards. Others, however, were more cautious and even fatalistic. Some informants stated that “in the end they [the Spaniards] must come and gain the kingdom because they were sons of the land and had grown up with the natives” (Hackett and Shelby 1942b:235), and “[w]e are not to blame, and we must await them [the Spaniards] in our pueblos” (Hackett and Shelby 1942b:240). One reason for this caution appears to be a growing concern over Popay’s dictatorial behavior. Many people were afraid of him; “the common report that circulated and still is current among all the natives is that the said Indian Popé talks with the devil, and for this reason all held him in terror, obeying his commands” (Hackett and Shelby 1942b:234). Popay also gained a reputation for intolerance. It was well known that as soon as he learned that his son-in-law, Nicholás Bua, the governor of San Juan, opposed his plot and was planning to inform the Spanish, he ordered him summarily killed (Hackett and Shelby 1942b:234).

Immediately after the revolt, Popay and his associates made a Spanish-style inspection tour of the pueblos. There was a theatrical quality to these visits.

In the pueblo of Santa Ana he [Popay] had prepared an invitation feast of the viands which the priests and the governors were accustomed to use; and a great table, according to the manner of the Spaniards. He seated himself at the head, and opposite to him he had Alonzo Catiti sit, seating the others in the remaining places. He ordered to be brought two chalices, one for himself and the other for the said Alonzo, and both began to drink, ridiculing and scoffing the Spaniards and the Christian religion. And Popé, taking his chalice, said to Alonzo, as if he were the father custodio: “To your
Paternal Reverence’s health.” Alonzo took his chalice and rising said to Popé: “Here is to your Lordship’s health, Sir governor” (Escalante in Twichell 1914:272–273).

This scene can be interpreted as a ritual inversion where Popay and Catiti are parodying Spanish authority by exaggerating their roles and mannerisms. In their language, gestures, and use of Spanish ritual objects, they are mocking the governor and custodio through the deployment of iconic signs. This also recalls Quautlatas’s behavior when he affected the role of the bishop following the Tepehuan revolt. At the same time, Popay and Catiti are physically indexing the Hero Twins, the supernatural deities who as war chiefs play a key role in military contexts. This double signification then is a means of asserting their own power and authority as the legitimate successors to the Spanish crown.

During his inspection tour, Popay routinely demanded tribute from each village (Sanchez 1983). Many Pueblo people regarded this act as a continuation of the indignities of the Spaniards. Popay’s authoritarianism was distasteful and his self-aggrandizing behavior was foreign to a people accustomed to submerging self to community. When Otermín’s reconquest expedition returned to New Mexico in 1681, Luis Tupatu of Picuris had deposed Popay and taken over his responsibilities as the supreme leader of the northern pueblos. Catiti remained as the leader of the southern pueblos. That the two leaders held comparable power is indicated by the fact that they divided up the livestock left behind by the fleeing Hispanic settlers among themselves (Sanchez 1983:145).

Living in Accord with the Laws of the Ancestors

It is possible to gain glimpses into the discursive aspects of this “rhetoric of revival” through a close linguistic analysis of the depositions given by the Pueblo Indians captured by Otermín in 1680 and 1681 (DeMarco 1999; Hackett and Shelby 1942a, b). The relevant depositions are from Pedro Namboa, an 80-year-old man from Alameda Pueblo, Juan, a 28-year-old man from Tesuque Pueblo, Pedro Naranjo, an 80-year-old man from San Felipe Pueblo, Juan and Francisco Lorenzo, two brothers, 20 and 18 years old respectively, also from San Felipe Pueblo, and Lucas, a 20-year-old Piro man. The deponents thus include young men and old men (but not middle aged men) from four different pueblos (Alameda, Tesuque, San Felipe, and an unnamed Piro village) representing four different language groups (Tewa, Keres, Tiwa, and Piro).

The depositions were elicited in the responses to a series of set questions posed by the Spaniards.63
Interrogation questions

(1) Why did the Indians of New Mexico rebel?
(2) Why did they obey Popé and hold him in such fear?
(3) How did Popé organize the rebellion?
(4) What happened after the Spaniards left?
(5) Did they think that the Spaniards would return?
(6) Who are their leaders?
(7) How did they learn of the return of the Spaniards?
(8) Did they notice that Spaniards had not harmed anyone at Isleta Pueblo (during their return)?
(9) What led them to come among the Spaniards?
(10) Why did they not establish peace with the Spaniards after the emergence of Don Luis Tupatu (as leader)?

The depositions are, of course, problematic because they were produced under coercion, translated by Indian interpreters with their own biases, and recorded by the Spaniards for their own purposes. Nonetheless, these accounts can be fruitfully compared for linguistic patterning to reveal aspects of the temporal dimensions of Pueblo revolt ideology. I have abstracted the relevant sentences and clauses and organized them by deponent.

References to time

[1] they have inherited successively from their old men the things pertaining to their ancient customs (Pedro Namboa, September 6, 1680 – Hackett and Shelby 1942a:61)
[2] which were the crops of the ancestors (Juan, December 18, 1681 – Hackett and Shelby 1942b:235)
[3.1] they were going underground to the lake of Copala (Pedro Naranjo, December 19, 1681 – Hackett and Shelby 1942b:246)
[3.2] now they were as they had been in ancient times (Pedro Naranjo, December 19, 1681 – Hackett and Shelby 1942b:247)
[3.3] they had always desired to live as they had when they came out of the lake of Copala (Pedro Naranjo, December 19, 1681 – Hackett and Shelby 1942b:247)
[3.4] they thereby returned to the state of their antiquity, as when they came out of the lake of Copala (Pedro Naranjo, December 19, 1681 – Hackett and Shelby 1942b:246–247)
[3.5] living thus in accordance with the law of their ancestors (Pedro Naranjo, December 19, 1681 – Hackett and Shelby 1942b:248)
living according to their ancient customs (Juan and Francisco Lorenzo, December 29, 1681 – Hackett and Shelby 1942b:251)

each one was to live according to such law as he wished, forsaking that of the Spaniards (Lucas, December 19, 1681 – Hackett and Shelby 1942b:244).

In each of these cases, time is evoked through the use of temporal nouns and adjectives associated with deceased relatives, laws, and customs. The actual words are translated as follows: “ancestors” (2, 3.5), “antiquity” (3.4), “ancient times” (3.2), “ancient customs” (1, 4). In one case (5), the temporal referent is suppressed and only implied by the notion of law. It is clear that these references to the past do not simply refer to the time prior to the coming of the Spaniards. Rather, they refer to mythic time, the time of origin when the Pueblo people emerged from the underworld to inhabit the world as they know it. In this sense, they are rhematic indexical sinsigns (individual phrases indexing a particular conception of the past) acting to constitute a rhematic symbol (the revival discourse).

Pedro Naranjo’s deposition provides additional support for this line of argument. Here time is associated with a particular spatial referent, the lake of Copala (3.1, 3.3, 3.4). This lake may refer to the primordial lake of the Tewa emergence myth. In this sense it can be interpreted as a dicent indexical legisign (the mythological lake) embodying a rhematic iconic sinsign (the specific location commonly identified as the place of origin). The lake of emergence was the place where supernatural beings, people, and animals lived together and death was unknown (Ortiz 1969).

Copala has at least two documented geographical referents, one in Mexico and another in Utah. It is identified as the ancestral home of the Aztecs and was reputed to have been fabulously wealthy (Hammond 1979:29). In 1565, Francisco de Ibarra was commissioned to locate it and he searched the area north and west of Zacatecas, but was unsuccessful.64 It is also associated with the Great Salt Lake. In 1626, Fray Gerónimo de Zarate Salmeron, while living among the Mohave people, learned that the lake of Copala was located at a 14-day journey to the west–northwest, in the vicinity of the Great Salt Lake (Tyler 1952). It was later identified with the Great Salt Lake by the Domínguez-Escalante expedition of 1776 (Hammond 1979:30).

There are also a series of Southwestern accounts known as Montezuma legends which, although complicated and difficult to interpret, are suggestive of close interrelations between Pueblo and Mexican Indians during the historic period. These legends generally refer to the Southwest as the home of Montezuma, the first Aztec king, and describe the southern migration of the Aztec people to the valley of Mexico. As Parmentier (1979:615) points out, Montezuma is closely linked to Poseyemu, a Tewa culture hero. Both are ambiguously human and divine, both have the power to visit the supernatural world, both changed their societies
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In fundamental ways. Montezuma and Poseyemu are even interlinked in some of the accounts of the revolt. “They had the mandate of an Indian who lives a very long way from this kingdom, toward the north, from which region Montezuma came and who is the lieutenant of Po he yemu” (Hackett and Shelby 1942:15). Parmentier (1979:622) concludes that Poseyemu, and I would add Montezuma as well, became a symbol of pan-Pueblo religious nationalism during the Revolt of 1680.

This linguistic analysis provides preliminary support for the thesis that the leaders of the revolt constructed a new form of temporality that circulated widely among Indian people and created a new social being. It underwrote a revitalization discourse which advocated the renouncement of Spanish beliefs and customs, ritual purification, and the reinstatement of traditional ceremonies. The ideological frame for this discourse was given by the belief that these practices would allow people to live like their ancestors and enjoy future health and prosperity. The citation of Poseyemu, Montezuma, and the lake of Copala as indexical icons of a primordial spacetime drew different Indian peoples together in a shared genealogy that transcended long-standing ethnic distinctions and rivalries, giving them a common historical destiny. As Parmentier (1979) puts it, the Montezuma discourse is “the signpost for Pueblos’ encounter with historical consciousness.”

Kotyiti Archaeology

In 1995, I established the Kotyiti Research Project as a collaborative research project of the University of Pennsylvania Museum and the Pueblo of Cochiti, New Mexico (Preucel 1998, 2000a, b; Preucel et al. 2002). Its goals are to identify and interpret the social practices surrounding the founding and occupation of Kotyiti, a Pueblo Revolt Cochiti community, located high on Horn Mesa approximately seven miles northwest of the modern Pueblo of Cochiti in north central New Mexico. The community consists of two adjacent villages and a number of related features, including trails and fortifications, that extend across the entire mesatop and down into Cochiti and Bland Canyons (Figure 9.2). The sites and their features fall within the jurisdiction of the Jemez Ranger District of the Santa Fe National Forest, and the Cañada de Cochiti Grant currently administered by the University of New Mexico. In 2003, the state of New Mexico acknowledged Cochiti’s claim to the mesa as its ancestral home and returned a portion of the mesa as part of a landswap.

Horn Mesa is part of the southernmost edge of the Jemez Plateau, also called the Pajarito Plateau, as defined by Edgar Lee Hewett (1906, 1953). The plateau is an upland of narrow mesas (potreros) and deep canyons radiating outwards
like fingers from the Jemez mountains down to the Rio Grande river. This rugged topography was formed by wind and water erosion of deep volcanic ash deposits (Goff et al. 1990). The dominant rock of the mesa is the Tshirege member of Upper Bandelier tuff (Smith et al. 1970). This rock, produced by the eruption of the Valles volcano approximately 1.12 million years ago, is a welded rhyolitic ash-flow and contains abundant phenocrysts of sanidine and quartz with trace amounts of clinopyroxene, hypersthene, and fayalite. Beneath this material lies the Otowi member of Lower Bandelier tuff which was produced by the eruption of the Toledo volcano approximately 1.45 million years ago (Goff et al. 1990). This rock forms the base of the mesa as well as the famous tent rocks west of the modern Pueblo of Cochiti.

The main village of Kotyiti Pueblo (LA 295) is a large double plaza pueblo. There are at least 137 ground floor rooms distributed in six roomblocks and a kiva in each plaza. All of the rooms are constructed of shaped tuff blocks set into an adobe mortar. The masonry work is generally quite good and, in some places, the walls are standing three meters high. Viga and latilla holes are present in upper levels of several walls and these provide direct evidence for roofs and possibly second-story rooms. Many rooms have wall features such as doorways, vents, niches, and pole sockets. Quite a few walls have large expanses of intact plaster and some of this is discolored from burning. Artifacts are concentrated in the shallow midden areas to the north, east, and south of the village. Approximately nine single room...
structures and several indeterminate features are located immediately outside the roomblocks. Tree ring dates indicate an occupation date as early as 1684 (Preucel et al. 2002; Robinson et al. 1978).

A second village, called Kotyiti East (LA 84), is situated approximately 150 meters southeast of the plaza pueblo. It is a rancheria consisting of an informal grouping of approximately 27 non-contiguous structures, ranging in size from one to two rooms. These structures are all highly eroded and, in some cases, the wall alignments are completely obscured. The building materials are tuff, and there is a markedly higher proportion of irregular to shaped stones than at the plaza pueblo. The spatial arrangement of the structures is rather loosely organized and extends in a linear fashion approximately 160 m down the mesa. Some structures possess a general northwest–southeast orientation, while others have a northeast–southwest alignment. In addition, there is a linear embankment in the central portion of the site. There are no obvious ceremonial features or midden areas and relatively few surface artifacts.

Four trails provide access to the Kotyiti community; three of which appear to be associated with Vargas’s fateful attack (Nelson 1912). One trail gradually approaches the mesa from the southwest. According to Vargas’s journal, this was the easiest trail and the one used by the villagers to bring up their livestock and horses. It was also the trail taken during the attack by the Pueblo Indian auxiliaries led by Bartolomé de Ojeda, war captain of Santa Ana Pueblo. A second trail climbs up the rough talus slope on the north side of the mesa. This was the path used to access water from the Río Chiquito. A third trail ascends the sheer tuff cliff face to the south. At its summit are a series of stone fortifications. This trail may have been the route taken by Captain Roque de Madrid in the assault. A fourth trail leads up farther down the southwest side of the mesa.

Kotyiti’s significance derives from its rich cultural and historical associations. Most importantly, the mesa and its archaeological sites have been, and continue to be, vitally important to the people of the Pueblo of Cochiti. According to Charles Lummis, it was the sixth of the seven villages founded in the ancestral migration of the Cochiti people from Frijoles Canyon (Lummis 1952). Some of the stories collected by Ruth Benedict refer to life on the mesa and one, entitled “How the People Came Down from Frijoles,” gives a Cochiti version of Vargas’s 1694 attack (Benedict 1931). Today, Cochiti elders regard the mesa and its sites as a sacred place, a physical connection to their ancestors, and they often visit it on hunting trips. Versions of some of the same stories gathered by Benedict are still told today. The mesa is also used as an outdoor classroom to help instruct Cochiti schoolchildren in their history, language, and traditional lifeways.

Kotyiti also occupies a prominent place in Southwestern history. It was a center of Pueblo resistance during the Revolt period. Notable Pueblo leaders such
as El Zepe (Cochiti), Francisco El Ollita (San Ildefonso), Alonzo Catiti (Santo Domingo), Antonio Malacate (Santa Ana/Zia), and Luis Picuri (Picuris) are all associated with the site by the Spanish accounts. In addition, the mesa and community were the setting of several confrontations with the Spaniards. The two most significant were the encounter with Juan Domínguez de Mendoza on December 14, 1681 and the battle with Diego de Vargas on April 17, 1694. The former effectively turned back Otermín’s recolonization effort and delayed the reconquest for 11 years. The latter paved the way for Vargas’s subsequent successful sieges at Astialakwa and Black Mesa which marked the beginning of a new era of Spanish rule.

The earliest archaeological description of Kotyiti is found in the journals of Adolph F. Bandelier, the pioneering ethnographer-cum-archaeologist who conducted far-ranging surveys for the Archaeological Institute of America. In 1880 Bandelier visited the mesa and mapped the village with the help of his Cochiti guide, Juan José Montoya. He also gathered considerable information on the ancestral use of the mesa. One Cochiti story relates its use as a refuge after a Tewa attack on Kuapa, a nearby valley village (Bandelier 1892:165–166). Bandelier also translated Vargas’s record of the attack and found that it closely corresponded with both Cochiti oral history and the accounts of the Hispanic settlers of Cañada (Bandelier 1892:177).

In 1912, Nels Nelson excavated Kotyiti for the newly established Southwestern Program of the American Museum of Natural History (ANMH) (Nelson 1912, 1914a, b). After a frustrating season at San Cristobal Pueblo in the Galisteo Basin, he shifted work to Kotyiti on the instruction of Clark Wissler, the curator of anthropology at the ANMH. Wissler presumably learned of the site from Bandelier and was convinced that it held special potential in resolving the gap between the prehistoric and historic periods (Letter from Clark Wissler to Nels Nelson, dated May 23, 1912, AMNH archives). In a two week period, from November 3 to 15, Nelson, his wife Myrtie, and his workmen mapped the plaza pueblo and excavated 135 rooms and two kivas. He discovered that the village was only partially destroyed by fire, since less than half of the rooms had evidence for burning. Nearly all his finds were made in the burned rooms. Nelson also excavated a few of the extramural rooms surrounding the plaza pueblo and a single room at the rancheria.68

In 1979, Julia Dougherty directed an inventory survey at Kotyiti for the Santa Fe National Forest. Her purpose was to resolve outstanding questions about the legal jurisdiction of the different sites and features on the mesa (Dougherty 1980; Dougherty and Staley 1979). Dougherty mapped the plaza pueblo and the locations of features in and around the village including the one-room structures. She also mapped the rancheria, identifying approximately 43 ground floor rooms “built in roomblocks containing from one to four rooms and scattered haphazardly
in an area of approximately 4,500 square meters” (Dougherty and Staley 1979). She did not identify any ceremonial features although she speculated on a possible kiva depression. Other features noted include a possible water control feature on the western edge of the site and a defensive wall extending approximately 250 meters along the south side of the mesa.

Social Dynamics at Kotyiti Pueblo

When Governor Antonio de Otermín entered the Northern Rio Grande in his reconquest bid of 1681, he learned that the people of Cochiti, Santo Domingo, and San Felipe had fled their villages to seek the protection of Cochiti Mesa (Hackett and Shelby 1942b:237). He divided his command and sent his lieutenant Juan Domínguez de Mendoza north to survey the situation. After marching up the Rio Grande and finding one after another pueblo vacated, Mendoza finally discovered the rebels in a camp on the rim of Cochiti Mesa (Hackett and Shelby 1942b:270). At this time, Cochiti Pueblo appears to have been one of the most active of the rebel villages. Its prominent status is indicated by the fact that it was selected to host a war council with representatives from all the Pueblo nations, except the Hopi (Hackett and Shelby 1942b:236).

At this council meeting, a dispute raged over how to respond to the return of the Spanish. While some of the elders wished to surrender peaceably, others, particularly the young men, favored war. In an impassioned plea, El Ollita (Francisco Tanjete), a San Ildefonso war chief and one of the leaders of the revolt, pronounced that even though his own brothers were marching with the Spaniards, he would kill them if they fought for the Spaniards, but he would spare them if they came over to the Indian side (Hackett and Shelby 1942b:241). In the end, the rebel view held sway and Alonzo Catiti, the “supreme leader of the Keres,” proposed a plan to send the most beautiful women down to Cochiti Pueblo, where the Spanish had established their plaza de armas, under the pretext of preparing their food. After dinner, the women were instructed to “provoke the Spaniards to lewdness,” and later in the evening while they were all asleep, Catiti and the men of Cochiti and their allies would attack (Hackett and Shelby 1942b:241–242). This plan failed, however, because the Spaniards were forewarned by two Indians who had overheard the strategy discussions.

In 1692, when Vargas first visited Kotyiti, the community was apparently inhabited by people from the three villages of Cochiti, San Felipe, and San Marcos (Kessell and Hendricks 1992:515). Vargas was told that the people had left their villages and moved up onto the mesa out of fear of their enemies, the Tewa, Tano, and Picuris. A year later, Vargas returned to Kotyiti and was greeted by two separate
groups of people (Kessell et al. 1995:425). By this time, the San Felipe people had left to establish their own village on the mesa above San Felipe Pueblo (Hodge et al. 1945:260; White 1932b:9). It thus seems likely that these two groups were people from the home-villages of Cochiti and San Marcos. Vargas identifies the leader of the Cochiti as El Zepe and the leader of the San Marcos contingent as Cristobal. The people of San Marcos were said to occupy a roomblock in the “second plaza” of the village (Kessell et al. 1998:200).

By 1694, factionalism within the Kotyiti community escalated to the point that El Zepe felt compelled to order the death of Cristobal and his brother Zue by an execution squad composed of three Cochiti and three San Marcos warriors (Kessell et al. 1998:200). Their crime was that they had served as informants to the Spaniards. In response to this act and the threat Kotyiti posed to the friendly Keresan villages of San Felipe, Santa Ana and Zia, Vargas attacked the village on April 17, 1694 with a combined force of over 150 men, the majority composed of Pueblo auxiliaries from the three friendly Keres villages. Although Vargas successfully captured the village in the early morning attack, most of the Kotyiti warriors escaped. Four days later, the Kotyiti warriors counterattacked and Juan Griego, a war captain from San Juan Pueblo, was killed (Kessell et al. 1998:206). This event indicates that at least some Tewa people were allied with Kotyiti.

In 1696, a second revolt broke out among the Pueblos and new political alliances were forged (Espinosa 1988; Jones 1989). Perhaps for defensive reasons, the Cochiti seem to have divided into three groups with one possibly reoccupying their old pueblo on the mesa, another living in the mountains, and yet another in the river canyon (Kessell et al. 1998:1056–1057). According to historical accounts, the Cochiti people took “the Pecos, Teguas, those of San Cristóbal Pecos, Queres, Apaches, Moquinos, Themes, Taos, Picuris of Ácoma, Zuni and Los Jemez” with them into the mountains (Hackett 1937:351). Such designations as “San Cristóbal Pecos” and “Picuris of Acoma” clearly imply that home-village identities remained important for these dislocated peoples.

These ethnohistoric accounts demonstrate that Kotyiti had a fluid, shifting population during the post-Revolt period. Mass movements of people into and out of the community suggest that attempts at consensus building were, at times, contradicted by individual leaders exercising their own power and authority. This political unrest was expressed most prominently in the disputes over how to best respond to the return of the Spaniards. Factionalism severely weakened the community, causing changes in leadership for the people from San Marcos and leading to the emigration of the people of San Felipe. When Vargas mounted his attack in 1694, he was accompanied by auxiliaries from San Felipe, perhaps including some of the very same individuals who had previously called Kotyiti their home.
Architecture and cosmology

Several Southwestern studies have examined how Pueblo architecture both encodes and reproduces social values and meanings (e.g., Brody 1997; Stein and Lekson 1992; Swentzell 1990). My analysis of the Kotyiti plaza pueblo builds upon this research to suggest that Kotyiti leaders used village architecture to mediate the new form of temporality associated with rhetoric of revival by acting as the material expression of “living in accordance with the laws of the ancestors” (Preucel 2000b). This mediation was accomplished through the semiotic deployment of cosmological referents.

In order to develop this argument, I begin with a generalized description of the structure of the Keres cosmology as it is documented in the ethnographic literature (Snead and Preucel 1999; White 1932a, b, 1935, 1942, 1962, 1964). The Keres people conceptualize their world as being inhabited by supernatural beings dwelling in specific houses located at the edges of the world. In the cardinal directions are the sacred mountains and lakes, the homes of paired male and female deities and specific animals and plants. According to White (1942), the people of Santa Ana Pueblo associate the cardinal directions and the corners of the world with specific mythological places and deities. North is also associated with Shipap, the place of emergence from the underworld; west with Wenima, the home of the katcinsas; south with Gowawaiima, the home of a group of supernaturals; and east with the home of the sun. In the four corners of the world are the homes of Thought Woman to the northwest, Spider Grandmother to the southwest, Butterfly to the southeast, and Mockingbird youth to the northeast. The identification and placement of these houses thus “domesticates” the landscape, rendering it intelligible, safe, and timeless.

By analogy, the plaza pueblo can be interpreted as an rhematic indexical sinsign of the Keres worldview, itself a dicent indexical legisign (Figure 9.3). This is perhaps best seen in the specific associations of the different gateways. The gateway between the two north roomblocks likely refers to Shipap. Three gateways refer to the Northwest, Southwest, and Southeast corners of the world and the houses of the deities dwelling there. The Northeast entryway, initially present, was subsequently closed off, thus preventing access to the home of Northeast deity. The identities of some of these deities may be identical with those known historically for Santa Ana Pueblo, while others may be local Cochiti variants.

It seems likely that the plaza pueblo may have been modeled upon White House, the primordial village of mythological time occupied immediately after the emergence from the underworld and where katcinas and people once lived together in harmony (Ferguson and Preucel 2005). There is ethnographic evidence of Keres people building villages in the form of White House. Matilda
Coxe Stevenson recorded a Zia story recounting the founding of an ancestral Zia village:

During the journey of the Sia from the white-house in the north they built many villages. Those villages were close together, as the Sia did not wish to travel far at any one time. Finally, having concluded that they had about reached the center of the earth, they determined to build a permanent home. The ti’âmoni [cacique], desiring that it should be an exact model of their house of white stone in the north, held a council, that he might gain information regarding the construction, etc., of the white village.

“I wish,” said the ti’âmoni, “to build a village here, after our white-house of the north, but I can not remember clearly the construction of the house,” and no one could be found in the group to give a detailed account of the plan.

The council was held during the night, and the ti’âmoni said, “Tomorrow I shall have some one return to the white-house, and carefully examine it. I think the Si’ïsika (swallow) is a good man; he has a good head; and I think I will send him to the white-house,” and calling the Si’ïsika he said: “Listen attentively; I wish you to go and study the structure of the white-house in the north; learn all about it, and bring me all the details of the buildings; how one house joins another.”

The Si’ïsika replied, “Very well, father; I will go early in the morning.”

Though the distance was great, the Si’ïsika visited the white-house, and returned to the ti’âmoni a little after the sun had eaten (noon). “Father,” said the Si’ïsika, “I have examined the white-house in the north carefully, flying all over it and about it. I examined it well and can tell you all about it.”

The ti’âmoni was pleased, for he had thought much concerning the white house, which was very beautiful. He at once ordered all hands to work, great labor being required in the construction of the village after the plan laid down by the Si’ïsika.
Upon the completion of this village, the ti’amoni named it Kóasaia. It is located at the ruin some 2 1/2 miles north of the present site of Sia (Stevenson 1894:57–58).

While it is impossible to know if this oral account dates to the time of the Pueblo Revolt, it certainly indicates a relationship between architectural design and origin stories. If this interpretation is correct, then White House would function as a rhematic iconic legisign since it is a general law that produces a specific type, in this case the plan of Kotyiti. Kotyiti would function as an indexical sinsign since its very architectural form iconically indexed White House and would have reminded people of their connections to a pre-Spanish world and legitimized what their leaders popularly presented as their ancestral way of life.

The Kotyiti plaza pueblo grew by means of four interrelated processes – the construction of entire roomblocks as single units, additions to the ends of existing roomblocks, the joining of roomblocks, and the construction of single room outliers. Some of these processes may have occurred simultaneously. On architectural grounds, the first roomblocks to be built appear to have been Roomblocks II, III, V, and VI; these four roomblocks would have imparted an “H” shape to the village and established the two plazas necessary for the moiety organization. All of these roomblocks were built as integral units and exhibit “ladder-type” construction (Cameron 1999:208). In 1692, Vargas noted that the pueblo possessed “three cuarteles and another large, separate one” (Kessell and Hendricks 1992:515). Vargas’s descriptions do not always match the archaeological data, but his account is consistent with the idea that Roomblocks II, III, and VI are the “three cuarteles” and Roomblock V is the “large, separate one.”

It is difficult to resolve satisfactorily the problem of the locations of the specific ethnic groups living within the Kotyiti community. However, there are some tantalizing clues. The people of San Marcos are identified as living in a roomblock on the “second plaza” (Kessell et al. 1998:200). It is not possible yet to determine conclusively which of the two plazas is the second plaza, but if the first plaza is the larger eastern plaza (the first plaza the Spaniards would have seen when they entered the village from the south trail), then the second plaza would necessarily be the western plaza. Similarly, the people of San Felipe are said to have assisted in constructing the village, but it is not known if they occupied their own roomblock or were distributed in rooms throughout the village (White 1932b). Regardless of this, it is clear that the people from these two villages enjoyed a special relationship with the Cochiti people and probably held substantial political power within the new community.

Two additional roomblocks (I and IV) may have been constructed sometime after 1692, assuming the above interpretation of Vargas’s account is correct. Both of these roomblocks indicate multiple, rather than unitary, building episodes.
Four room suites were used to connect Roomblocks I and II and thus close off the northeast gateway. Because of the irregularity of these rooms, this process likely occurred in a series of separate building phases. Discrete room additions were also built at the ends of Roomblocks I, III, V, and VI and at least nine outlier rooms were established immediately outside the village, adjacent to each of the exterior roomblocks.73

Ceramics, social groups, and ideology

Ceramics have often been used to identify social groups, trade relations, and population movements in Southwestern archaeology (Hill 1970; Warren 1969, Washburn 1977). They have less commonly been used to identify ideologies (but see Crown 1994; Graves and Eckert 1998). Patricia Capone and I have conducted a study of the ceramic assemblage from Kotyiti Pueblo to address issues of population movement and revolt period ideology.74 We used petrographic analysis to investigate whether pottery was brought into the community by refugees from San Felipe and San Marcos Pueblos and design element analysis to determine the existence of a new design canon related to revitalization discourse. To put this in semiotic terms, we are interpreting tempering styles as dient indexical legisigns since the sherds with different tempering materials produce a general pattern that is identifiable on geological grounds in terms of origin. We are also exploring the degree to which pottery style functioned as rhematic indexical legisigns where specific designs and motifs are markers of a revivalist rhetoric.

Our database consisted of a sample of 128 sherds from two different museum collections. The majority (113 sherds) are from the Nelson collection of the American Museum of Natural History (AMNH). In his 1912 excavations, Nelson took sherd samples of representative ceramic types from select rooms at the plaza pueblo. The rancheria, however, was poorly represented in his collection, so we augmented his sample with 15 sherds from the Mera collection of the Museum of New Mexico, Laboratory of Anthropology. These are all from surface contexts. This process yielded a total of 109 sherds from the plaza pueblo and 19 sherds from the adjacent rancheria.

The painted ware assemblage

The Kotyiti painted ware assemblage is dominated by two distinctive wares – the Kotyiti glazewares and the Tewa matte paint wares. The Kotyiti glazewares are a member of the terminal grouping, Glaze F, of the famous Rio Grande glazeware sequence identified by Nels Nelson (1916), Madeline Kidder and A. V. Kidder
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(1917) and refined by H. P. Mera (1933). The Kotyiti glazewares are usually distinguished from the earlier Glaze E group by an increase in glaze paint vitrification (Hayes et al. 1981:98). Nelson, Kidder, Hewett, and others have termed them a “degenerate glaze” because their designs were often partially or totally obscured by the running of the glaze paint during the firing process. They were produced between 1625/1650 and 1700 (Mera 1940:5; Schaafsma 2002:195).

There are two main variants of Kotyiti glazeware: a bichrome and a polychrome. The bichrome variant includes Kotyiti glaze-on-red, Kotyiti glaze-on-tan, Kotyiti glaze-on-white, and Kotyiti glaze-on-yellow. There is some gradation between the white, tan, and yellow slips. The polychrome variant is identical to the bichrome variant with the exception that red matte paint is used as a filler in various design motifs. Bowls tend to have tall direct rims with pronounced carinations where the rim meets the bowl body. There are two different jar forms, a short-necked globular form and a long-necked form. Mera (1939:70, 90–101) considered the former to be a local Keresan development and the latter to derive from earlier Tewa (Sankawi) forms. A small number of glazewares were made in Spanish forms, such as soup plates, cups with handles, and candlesticks.

The Tewa matte paint wares have been defined by Mera (1932), Toulouse (1949), Harlow (1973), and Batkin (1987) and comprise three main types, Tewa black-on-white, Tewa Polychrome, and Pojoaque Polychrome. Tewa black-on-white is a bowl form with black organic paint designs applied to white slipped exterior and sometimes interior surfaces. This type has also been called Sakona black-on-white (Harlow 1973:28). Tewa Polychrome is similar to Tewa black-on-white with the exception that it is only partly slipped with white slip. It has both bowl and jar forms. The bowl form has a sharp carination with a white slipped decorated band below the rim and a red polished underbody. In some cases, red matte paint is added to the top of the rim. The jar form has a long neck which is slipped white and decorated and a central mid-panel also slipped and painted. Pojoaque Polychrome is a jar form identical to the Tewa Polychrome jar form with the exception that it has a red slipped and polished neck. Spanish forms are also known.

Petrographic analysis

Capone’s petrographic analysis identified five different tempering materials in the Kotyiti glazewares – devitrified tuff, crystalline basalt, igneous porphyritic felsite, vitric tuff, and latite (Table 9.1). The largest group, at 59 percent, is devitrified tuff. This result is consistent with other studies (e.g., Shepard 1942; Warren 1976:B117, 1979a, 1979b:239, 1979c) and almost certainly indexes ceramics that were locally produced at Kotyiti. The second largest group, at 19 percent, is crystalline basalt. This material has been called “Zia basalt” in the literature and generally assumed
Table 9.1 Percentages of tempering materials for Kotyiti glazeware and Tewa ware sherds from the Kotyiti plaza pueblo (AMNH collections).

<table>
<thead>
<tr>
<th>Temper type</th>
<th>Kotyiti glazewares (n=69)</th>
<th>Tewa wares (n=26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ash</td>
<td>0</td>
<td>65</td>
</tr>
<tr>
<td>Devitrified tuff</td>
<td>59</td>
<td>35</td>
</tr>
<tr>
<td>Crystalline basalt</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>Igneous porphyritic felsite</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Vitric tuff</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Latite?</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

to have been produced in the Zia district (Warren 1979b). Two other materials, igneous porphyritic felsite and vitric tuff, account for about 10 percent each. The latter may be locally produced. The smallest group at 3 percent is represented by latite. This tempering material is characteristic of San Marcos Pueblo (Warren 1976:132). These ceramics may have been brought to Kotyiti by San Marcos people after the abandonment of their village. Warren (1979b:239) found similar results which she interpreted as evidence for Galisteo Basin refugees.

Capone’s analysis of the Tewa wares identified only two kinds of temper, ash and devitrified tuff (Table 9.1). The dominant temper, at 65 percent, is ash. This material is not available locally and comes from deposits in the Española Valley. However, a significant number of sherds, 35 percent, contained devitrified tuff. This material, as noted above, is locally available and, indeed, widely distributed across the Pajarito Plateau. Given that this is the dominant tempering material for the Kotyiti glazewares, this raises the intriguing possibility that there were Tewa refugees, not recorded in Vargas’s campaign journals, living at Kotyiti and using the local Kotyiti tempering materials.

In order to investigate this idea further, we examined a sample of 14 sherds from Black Mesa (LA 23) in the Mera collection of the Museum of New Mexico, Laboratory of Anthropology. Black Mesa is a Revolt period mesatop village located near San Ildefonso village and known historically to have been occupied by people from nine different Tewa and Tano villages. We assumed that the ceramics used at this village would be representative of those being produced by Tewa potters of the Española Valley during the Revolt Period. Our analysis revealed that 86 percent of the tempering materials are ash and 14 percent are multi-crystalline quartz. The absence of devitrified tuff in the Black Mesa sherd sample is significant and strongly
suggests that some of Tewa ceramics from Kotyiti were made by refugees who used local tempering materials to produce their distinctive pottery.

The presence of Tewa people living at Kotyiti is not documented in the Vargas journals. However, Hawley (1936:91) noted an abundance of the Tewa wares at Kotyiti and because of this identified Kotyiti as the “type site” for Tewa Polychrome. Harlow (1973:44) has speculated that “refugee Tewas must have lived at the Kotyiti Pueblo for a while before the village was destroyed in 1694.” Ethnohistorical evidence also indicates close ties between the Cochiti and Tewa people at Kotyiti. Vargas’s journals indicate that Juan Griego, a San Juan war captain, was killed in battle at Kotyiti on April 21, 1694 (Kessell et al. 1998:206). In addition, the Tewa were among the people that fled with the Cochiti into the Jemez mountains during the Revolt of 1696 (Hackett 1937:351).

We also investigated the spatial patterning of the ceramic wares within the plaza pueblo and between the plaza pueblo and rancheria to address issues of residential segregation by ethnic group. Our analysis reveals that the plaza pueblo and the rancheria both share the same ceramic types. There are, however, higher frequencies of non-local ceramics at the plaza pueblo (40 percent) than at the rancheria (21 percent). Although these results may be skewed by the large sample size from the plaza pueblo, they are consistent with the idea that the plaza pueblo was composed of a more heterogeneous group of people than the rancheria.

Within the plaza pueblo the Kotyiti glaze wares with San Felipe/Zia basalt are predominantly found (66 percent of the cases) in rooms that were added onto older roomblocks. If these vessels were brought into the Kotyiti community by San Felipe people refugees, then this finding may be evidence that they were latecomers and were integrated into the village as individual families and not as a discrete social unit. This pattern is in sharp contrast to the people of San Marcos, who are said to have occupied their own roomblock on the “second plaza” and presumably formed their own residentially based social unit.

The spatial patterning of the Tewa wares is not particularly strong. They are found in only three roomblocks (I, IV, and VI) and the east kiva at the plaza pueblo. They are also present at the rancheria. There is, however, a difference with respect to the polished Tewa wares, particularly Kapo black and Kapo grey, which is present in higher frequencies (8.5 percent versus 1 percent) in our sample from the rancheria. This may imply that some Tewa people were living in the rancheria.

Design element analysis

Capone and I performed a design element analysis on the Kotyiti ceramic assemblage in the Nelson collection which contained numerous large sherds with identifiable designs. We followed the procedures used by other researchers.
(see Graves and Eckert 1998; Harlow 1973; Kidder 1915, 1936; Kidder and Amsden 1931). The methodology involved identifying a series of distinct design elements and motifs that were replicated either individually or together with other elements or motifs in registers or panels. Some of these motifs are identifiable as to their specific referent (e.g., bird wing or animal), but others are considerably more abstract and difficult to classify. We identified thirty-one design elements/motifs on 103 sherds (Table 9.2).

The most frequent motif, constituting more than a third (36 percent) of all identified designs, is the key motif. It occurs in a variety of forms – doubleheaded, pendant, and crossed. The most common of these forms is the doubleheaded key motif (Figure 9.4). The doubleheaded key motif has considerable antiquity in the Río Grande glazeware sequence. It seems to have originated in Glaze B times (A.D. 1400–50) and continued in use up to Glaze F times (Kidder 1936). Kidder (1936:227) notes, however, that although present, the doubleheaded key is relatively rare on earlier Glaze E (A.D. 1515–1625) ceramics. The increased use of this motif during the Revolt period is thus evidence that Kotyiti women revived traditional motifs on their glazeware ceramics. This linkage to ancestral designs can be interpreted as a strategy to evoke a new form of temporality.

This revival is not limited to Kotyiti Pueblo. Additional examples of the doubleheaded key motif are found on glazeware vessels from other contemporaneous Revolt period sites. Most significantly, it is present on Kotyiti glazeware sherds from four other mesatop villages, Astialakwa, Boletsakwa, Old San Felipe, and Cerro Colorado. In addition, it is a common motif on related wares such as Puname Polychrome (Carlson 1965:Pl 31c, d, f; Harlow 1973:Pl 23e), Gobernador Polychrome (Carlson 1965:Pl 20b), Hawikuh Polychrome (Smith et al. 1966:Figs 75, 78, 79), and Ashiwi Polychrome (Harlow 1973:Pl 32e). This broad distribution implies the circulation of a ceramic discourse that actively materialized and shaped the calls to “live in accordance with the ways of the ancestors.”

The most popular motif on Tewa painted wares is the hooked triangle (Figure 9.5). This motif is present on Tewa Black-on-white bowls, Tewa Polychrome bowls, and Pojoaque Polychrome jars and accounts for one quarter of all the identified motifs on these wares. The immediate antecedents for this motif appear on Sankawi and Biscuit wares (Harlow 1973). The hooked triangle motif is also occasionally present on contemporaneous Kotyiti glazewares, Hawikuh Polychrome (Smith et al. 1966:Figs 75e, 78l), and Ashiwi Polychrome (Harlow 1973:Pl 32a, b; Mera 1939:Pl 64, 65). The use of the hooked triangle is evidence that Tewa women used archaic design elements on some of their matte paint wares.

Not all of motifs, however, are archaic revivals and there is evidence of experimentation with novel forms. In our sample of Kotyiti glazeware jars, this experimentation is indicated by three complex motifs: the pendant key/chevron
Table 9.2 Percentages of design elements on sherds from the Nelson collection (AMNH collections).

<table>
<thead>
<tr>
<th>Element</th>
<th>Local glazewares</th>
<th>San Felipe/ Zia wares</th>
<th>Tewa wares</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doubleheaded key</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>10.47</td>
</tr>
<tr>
<td>Hooked triangle</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>9</td>
<td>10.47</td>
</tr>
<tr>
<td>Triangle</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>6.98</td>
</tr>
<tr>
<td>Feather</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>Chevron</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>Dotted square</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>Dotted clouds</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>Zig-zag</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>4.65</td>
</tr>
<tr>
<td>Pendant keys</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4.65</td>
</tr>
<tr>
<td>Single key</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>4.65</td>
</tr>
<tr>
<td>Lunette</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>3.49</td>
</tr>
<tr>
<td>Feather being?</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>3.49</td>
</tr>
<tr>
<td>Line triangle</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>3.49</td>
</tr>
<tr>
<td>Open triangle</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.33</td>
</tr>
<tr>
<td>Lozenge</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.33</td>
</tr>
<tr>
<td>Corn</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.33</td>
</tr>
<tr>
<td>Eye</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Shield</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Slot triangle</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Bird wing</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Medallion</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Bulls eye</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Hook</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Bowtie</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Scallops</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Stepped mountain</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Animal</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Key-tail</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Open square</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Double key cross</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Dotted triangle</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.16</td>
</tr>
<tr>
<td>Totals</td>
<td>49</td>
<td>13</td>
<td>24</td>
<td>86</td>
<td>100.00</td>
</tr>
</tbody>
</table>
The pendant key/chevron motif consists of opposing pendant keys on either side of an inverted triangle element. Similar motifs are known from Ako Polychrome (Harlow 1973:Pl 27b) and Ashiwi Polychrome vessels (Mera 1939:Pl 55). The “sacred mountain” motif consists of repetitive decorative elements applied to both sides of a triangle. Versions of this motif are present on four sherds (Figure 9.6). Somewhat similar motifs but with “stepped” mountains are present on some Gobernador Polychrome (Carlson 1965:Pl 19e) and Ogapoge Polychrome vessels (Carlson 1965:Pl 34f). Finally, the “feather being” motif is composed of an eagle feather surmounted by a solid or dotted face with two eyes. This design is present on only two sherds. Another possible example can be seen on a Hawikuh glaze-on-red jar (Mera 1939: Pl 48), but further studies are needed to determine the distribution of this motif.
In the Aftermath of the Pueblo Revolt

Figure 9.5  Hooked triangle motif (Capone and Preucel 2002:Figure 7.7).

Figure 9.6  Sacred mountain motif (Capone and Preucel 2002:Figure 7.8).
This analysis of the Tewa matte paint jars, like the analysis of Kotyiti glazewares, hints at the introduction of new motifs and designs. Tewa Polychrome jars are an extremely rare form and there are no known whole specimens (Batkin 1987). Although our sherd sample from Kotyiti is very small ($n = 4$), one Tewa Polychrome jar sherd has a shield design, which is divided into four quarters with four pendant eagle feathers (Figure 9.7). This image functions unambiguously as a rhematic iconic sinsign to reference an actual shield and as rhematic indexical legisign to draw attention to the publicly articulated reasons for warfare.

**Regional Settlement**

In order to understand the shift in settlement in the post-Revolt period, T. J. Ferguson, Matt Liebmann, and I have conducted a spatial analysis of ten Pueblo Revolt mesa-top villages in the Keres, Jemez, Hopi, and Zuni districts. These villages include Kotyiti, Kotyiti East, Old San Felipe, Canjilon Pueblo, Boletsakwa, Astialakwa, Patokwa, Cerro Colorado, Dowa Yalanne, and Payupki (Table 9.3, Figure 9.8). We compiled our database using published information and data recorded in the Archaeological Records Management System of the Museum of New Mexico, supplemented with fieldwork at several sites to verify site plans. All of these mesa-top villages were constructed and occupied for relatively short durations, usually less than 14 years. Their architectural plans are generally not obscured by subsequent occupations. The generally good preservation and the
absence of subsequent settlement make these villages well suited to the investigation of social responses that Pueblo peoples implemented during this period of severe political and cultural stress.

Although there is substantial variation in layout and size. Seven of the villages include formal plazas, which are defined as open areas delineated by architectural units on four sides. Three of these sites – Kotyiti, Patokwa, and Boletsakwa – share distinctive double plaza plans. Other sites have curvilinear, L-shaped, or parallel architectural units. Several sites, including Astialakwa, Dowa Yalanne, and Kotyiti East, have a large number of buildings dispersed in space and a less formal layout than the plaza-oriented villages. Two communities – Dowa Yalanne and Kotyiti/Kotyiti East – consist of combinations of large formal pueblos and dispersed buildings. Boletsakwa, Kotyiti, Patokwa, and Payupki have identifiable kivas while other sites lack evidence of these ritual features, suggesting a shorter period of anticipated occupation at the latter sites.

### Space syntax analysis

Space syntax is an approach for investigating structural differences in the use of open architectural space (Ferguson and Preucel 2005; Liebmann et al. 2005). It was developed to quantify the spatial relationships formed by architecture and to facilitate the interpretation of how these relationships structure and control the movement of people, and hence social interaction within buildings and settlements (Hanson 1998; Hillier 1996; Hillier and Hanson 1984). It has been widely used in Southwestern archaeology to characterize both prehistoric and historic period villages (e.g., Ferguson 1996; Shapiro 2005; Van Dyke 1999).
Figure 9.8 The ten Revolt Period mesa villages: Dowa Yalanne (a), Kotyiti (b), Kotyiti East (c), Astialakwa (d), Old San Felipe (e), Cerro Colorado (f), Canjilon (g), Boletsakwa (h), Patokwa (i), and Payupki (j) (Liebmann et al. 2005:Figure 5).

As described by Ferguson (in Liebmann et al. 2005), the method requires that the open space within a settlement be divided into the fewest possible convex spaces, that is, areas in which no tangent drawn on the perimeter passes through the space. A person standing in a convex space has a clear and unobstructed view of the entire area. The next step requires that a series of axial lines be drawn through convex spaces by inscribing the longest straight line through the open space, and continuing until all convex spaces have been crossed. In an axial space, a person is able to see, move along, and interact with other people through the entire route of the line. These techniques produce axial graphs whose spatial properties can be quantified.

Of special interest is “integration,” the syntactical measure that quantifies the “depth” each axial space is from every other space in a site plan (Hillier and Hanson 1984:108). Integration measures how many “steps” or spaces one has to pass through in order to move among different places in a settlement, and then compares the value of each space to every other space in a settlement. This measure is
then standardized to enable the comparison of axial systems of different sizes. High values of integration indicate that an axial space is well connected to other spaces in a settlement, making movement among them relatively easy. Low values indicate spatial segregation, where relatively isolated axial spaces constrict movement.

The distributions of integration values for the ten villages analyzed here are depicted as notched box plots (Figure 9.9). An analysis of these values indicates that there are statistically significant differences in the spatial structures of many of the Revolt era mesa-top villages. Our analysis confirms that the three sites with dispersed plans – Kotyiti East, Astialakwa, and Dowa Yalanne – have higher mean integration values than those of the other villages. The well-integrated spatial structure of these sites suggests that their defensibility came from their location on top of high, steep-sided mesas rather than from any fortress-like configuration of their architecture. After gaining access to the mesa tops, it was easy to enter and move about within the villages.
Dowa Yalanne presents an interesting case because its spatial integration is similar to both the dispersed plan of Astialakwa and the plaza-oriented plan of Kotyiti. Kotyiti, in turn, has a structural similarity to the other plaza-oriented pueblos of Boletsakwa, Patokwa, and Payupki that are significantly less integrated than Dowa Yalanne. Although their plans appear very different, Dowa Yalanne and Kotyiti exhibit similarities in the integration of their spatial structure. This similarity is likely due to the presence of the two large L-shaped residential units at Dowa Yalanne, and the influence these have on the overall spatial structure of the site.

In the villages with low integration values, Kotyiti, Canjilon, Boletsakwa, Patokwa, Old San Felipe, Payupki, and Cerro Colorado, movement within the pueblos would have been somewhat restricted, and many public activities were carried out in the plazas in view of the other inhabitants. The spatial organization of these villages suggests a greater degree of social control exercised by a central decision-making authority, either a cacique and/or a council of religious leaders. The segregation of space in the plaza-oriented pueblos means that access within the settlements was restricted to movement along pathways governed by gateways. The architecture physically channeled social interaction and segregated specific areas of the pueblo associated with particular social groups. This may be related to the fact that some religious and political activities were carried out in secret, as they are today and as they were during Spanish occupation (Dozier 1970). Payupki, the settlement constructed by Tiwa immigrants to the Hopi Mesas, exemplifies the highly segregated spatial structure that stands in marked contrast to the spatial integration of the dispersed settlements. The architectural plan of Payupki has a clear internal focus that physically separated its residents from their hosts at the neighboring Hopi villages. Because Payupki was an ethnic enclave at Hopi, its residents may have used the architecture of their village to set themselves apart and maintain their distinct social identity.

Additionally, bonding and abutment patterns show that the plaza-oriented villages exhibiting low integration values are made of long, linear roomblocks resulting from what has been termed “ladder-type” construction. This architectural form occurs when multiple rooms are constructed simultaneously by first building two long parallel walls, then subdividing the space between them to create individual rooms (Cameron 1999:207). Ladder-type construction results from a group effort, indicating organization of labor above the household level (Cameron 1999:208; Cordell 1998:27). The construction of these plaza-oriented sites was the result of a coordinated effort resulting from a higher degree of planning, communal organization, and centralized leadership than that exhibited at the dispersed sites.

In the dispersed settlements with higher integration values (Kotyiti East, Astialakwa, and Dowa Yalanne), movement was comparatively unrestricted. The
relatively open settlement plans of these villages may indicate a lesser degree of
social control by a central authority. The spatial orientation of dispersed settle-
ments was directed toward the community as a whole, rather than the more highly
segregated spaces associated with religious activities of ritual groups in the plaza-
oriented pueblos. Astialakwa and Kotyiti East lack any archaeological indication of
formal kivas in marked distinction with most of the plaza-oriented pueblos. The
absence of ceremonial kiva architecture at these dispersed villages could indicate
that the people who resided at these sites had modified their traditional religious
practices. For example, the inhabitants of Kotyiti East may have participated in
ceremonies at the Kotyiti plaza pueblo.

The situation at Dowa Yalanne is less clear because of the isolated location of the
village and the presence of several unroofed structures that may be ritual features
(Ferguson 1996:52–53). In addition, Vargas described three kivas in the plaza of
the pueblo he visited on Dowa Yalanne in 1692 (Ferguson 2002). Although today
there are no unambiguous archaeological traces of kivas on Dowa Yalanne, the site
has not been excavated and these features may in fact be present, but not visible
on the surface.

At the dispersed settlements, there was a shift in the organization of labor during
construction away from communal work groups to construction organized on the
household level. Recent investigations of bonding and abutment patterns in the
roomblocks of Astialakwa and Dowa Yalanne reveal that this architecture is not the
result of ladder-construction, but that roomblocks were built as one to four room
suites (Ferguson 1996; Liebmann 2006). Even among the long, multi-roomed
buildings at Dowa Yalanne and Astialakwa that appear at first glance to repres-
ten classic examples of ladder construction, patterns of abutment demonstrate
that construction took place on a room-by-room and probably a household-by-
household basis. This shift in the social organization of labor from communal
work groups to household-level construction was a significant factor affecting the
spatial organization and integration values of the more dispersed sites.

Signs of the Times

The Pueblo Revolt mesa villages were clearly established for defensive purposes.
Their construction on high mesas created formidable strongholds against the
reduction campaigns of the Spaniards and the increasingly frequent raids of the
Apache, Navaho, and Ute. Beyond the structuring of social interaction, these
mesa villages have important ideological meaning related to their role in repro-
ducing Pueblo culture and contributing to the revitalization discourse. Following
Parmentier (1985b, 1987), they can be read as “signs of history” and “signs in
history.” The former sign type signifies the particular ways in which a society objectifies its past, while the latter is the locus of intentionality and strategic action.

For Pueblo people, mesas, along with mountains, hills, lakes, and rivers, hold special meanings that together constitute a sacred landscape (Ortiz 1969; Swentzell 1990). They were and are the homes of specific supernatural beings that control the world. The shrines located in these areas were and are used by religious practitioners during specific times of the year to insure the well-being of the community. In addition, mesas are metaphorically linked to clouds, rain, lakes, and various supernatural deities. It seems significant that many of the new mesa villages were founded on the site of, or adjacent to, the ruins of, earlier villages. It can thus be argued that in these cases Pueblo people were quite literally living with their ancestors.

Kotyiti, Boletsakwa, Astialakwa, Patokwa, Cerro Colorado, Black Mesa, and Dowa Yalanne all received immigrants from various Rio Grande villages. As multi-ethnic villages, they are testimony to the persistence of old political alliances and the emergence of new ones. The social processes played out in these villages facilitated the popular, pan-Pueblo discourse advocating cultural revitalization (Preucel 2000a, b). It is likely that variability in the architectural layouts of the Pueblo Revolt mesa villages, including both highly segregated plaza-oriented pueblos and highly integrated ranchería plans, is related to the different ways that language and material culture were actively deployed during the Pueblo Revolt to mediate community and social identity.

The Pueblo Revolt mesa villages can be read both as “signs in history” and “signs of history.” All of the mesa villages are, in fact, signs in history because they are the result of strategic decisions to vacate mission villages and take up residence at new, defensible mesa-top locations. They are a physical testimony to a commonality of purpose that transcended village identities and united people across ethnic lines. The need to vacate the mission villages may have been required by the acts of violence that took place during the Pueblo Revolt of 1680. In fact, the death of the missionaries and destruction of the churches and conventos may have “polluted” the mission village and made them inhospitable sites for the revival of traditional religious practices.

Another “sign in history” is provided by residential segregation at the villages pairs of Kotyiti and Dowa Yalanne. Here the contrast is between the formal architecture (dual plaza and L-shaped pueblos) and the informal ranchería settlements that appear to have been built with more immediate, practical concerns in mind. The absence of kiva architecture at the rancherias indicates the people who resided at these sites were not socially positioned to create a sacred landscape thus they would have had to modify their traditional religious practices. Since Kotyiti East is
adjacent to Kotyiti and the L-shaped buildings on Dowa Yalanne are near the smaller units, it seems likely that residents of the ranchería sites probably participated in religious activities at the nearby plaza and L-shaped pueblos. There is a close connection between ritual and power in Pueblo society and, for this reason, the lack of religious architecture at the ranchería villages implies political dependence.

Some of the mesa villages can also be interpreted as “signs of history,” that is, as signs consciously created to embody a group’s history. This history is intimately associated with katsinas, supernatural deities, ancestors, origins, and migrations. When katsinas dance in the plaza of a contemporary Keres pueblo, they cause people to recall the primordial time when people and katsinas lived together in harmony at an ancestral village known as White House, occupied just after the emergence of the people from the underworld. The katsinas are here being interpreted as dicent indexical signs since they are a way of presencing the deities (Ray 1987). They also are a way of restoring world harmony and balance, as space and time become merged during their performance.

I have argued above that Kotyiti plaza pueblo functioned as a rhematic indexical sign of Keresan cosmology. In addition to being an icon of White House, the archetype village, the plan of Kotyiti is indexical because its gateways and openings channeled the movement of people through the village in ways that would remind people of the differences between this new village and the street layouts of their recently vacated mission pueblo. This interpretation is consistent with the results of the space syntax analysis, which indicates a high degree of spatial segregation and relatively isolated axial spaces. The semiotic associations of the Kotyiti plaza pueblo thus actively constituted a new social order and, at the same time, legitimized the political agenda favored by some of the revolt leaders.

The double plaza plan of Kotyiti is replicated at two other mesa villages, Patowka and Boletsawka. Patokwa, as an ancestral Jemez village, and Boletsakwa, as an ancestral Jemez/ Santo Domingo village, probably shared a general cosmological worldview with each other and with Kotyiti, even though the details of some of the specific cosmological associations may have been different. The semiotic interpretation of the cosmological meanings of Kotyiti plaza pueblo is thus likely to apply to them as well. This high degree semiotic coding likely indexed the close interaction between the ritual leaders of these villages and at the same time legitimized their claims to power.

Conclusions

Numerous studies have identified the Pueblo Revolt as the outcome of a broad-based cultural revitalization movement that united the Pueblo people in the
common goal of eliminating Spanish authority. Far fewer have examined the social practices, both material and discursive, underlying the revolt. As we have seen, Pueblo people entextualized specific notions of time as the basis of their revitalization ideology. This ideology was constituted by a popular discourse that proscribed living “in accordance with the laws of the ancestors.” The precise origins of this discourse are obscure, but there are suggestions that it existed as early as the first half of the 17th century and may have underwritten some of the unsuccessful revolt attempts in New Mexico and New Vizcaya. This discourse faltered, however, immediately after the revolt as leaders of specific villages vied among themselves to reconstitute their own versions of Pueblo society.

In my study of the Kotyiti Pueblo community, I have identified some of the social practices by which Kotyiti men and women established a new form of temporality. Kotyiti leaders likely built their new village on the mesa in the image of White House. By encoding Keresan cosmology in architecture, they created “signs of history.” The form of the plaza pueblo would have served as rhematic indexical sinsign legitimizing their authority. Simultaneously, Kotyiti women produced pottery with design elements (the doubleheaded key motif) that, as rhematic iconic legisigns, referenced earlier pre-Spanish forms. In addition, both the double plazas and doubleheaded key motifs likely function as a symbolic argument to refer to ideas of balance and harmony between the two moieties. With the continued influx of refugees, the Kotyiti leaders implemented a strategy of residential segregation and encouraged the new arrivals, some of them possibly Tewa, to build their own village adjacent to the plaza pueblo. Pueblo women also used new design elements that referenced warfare and ritual practice. These practices can be read as “signs in history.”

There is compelling evidence that this revitalization discourse identified at Kotyiti circulated widely among the Pueblo people and created a new sense of self and community. Similar double plaza pueblos were constructed in the Jemez district at Patokwa and Boletsakwa. These villages housed different groups of Jemez and Santo Domingo people and likely shared a worldview with the Kotyiti people. These associations are further indicated by the widespread use of the doubleheaded key motif on the glazeware pottery at each of these villages. However, the mesa villages in the Zuni and Hopi districts reveal substantial architectural variability and double plaza pueblos are not present. In addition, the doubleheaded key motif is never used alone on pottery, rather it is used in combination with feather motifs (Mills 2002). This variation may indicate that the ritual leaders of these villages favored their own semiotic ideologies that differed in subtle, but nonetheless significant, ways from those advocated by the Northern Rio Grande leaders of the revolt.
CHAPTER 10

Material Meanings in Practice

…what we call matter is not completely dead, but is merely mind hide-bound with habits.

Charles Sanders Peirce (1.658)

This book explores archaeological semiosis as a distinctive social practice implicated in the pragmatic mediation of material culture across time and space. I take as my starting point Foucault’s (1970) thesis that the human sciences are not sciences in the standard sense, rather they are radically different forms of knowledge production. While they may make use of the physical sciences, they also implement a “double hermeneutic” whereby interpretation must always take account of the interpretations of the subjects in question, what Geertz (1976) calls “the native’s point of view.” This stance also follows from a commitment to the Kantian ethical imperative whereby one should act in such a way as to respect humanity in oneself and in others. Following Foucault’s analysis, it is possible to show that archaeology is a pragmatic discourse constituted by meaning-making practices in the present that systematically articulate with past meaning-making practices. The archaeology of archaeology is thus a meta-contextual investigation of how these discourses and material practices become semiotic ideologies and how they change over time.

I have suggested that a productive way of evaluating Anglo-American archaeology is through a consideration of its historical engagement with structuralism and semiotics. This idea might seem somewhat counterintuitive since the dominant discourse on the rise of modern archaeology emphasizes the significance of functionalism and adaptationalism (O’Brien et al. 2005; Renfrew and Bahn 2000; Willey and Sabloff 1993). Nonetheless, I argue that semiotic issues underlie
functionalism as much as they do structuralism. Semiotics is the study of how humans make and use signs as they mediate their existence in the world. Semiotics permits the comparison of various interpretive strategies with respect to their modalities and arguments, but, at the same time, it provides no theoretical guidance as to how to value those arguments. These judgments must be supplied by external interpretive frameworks and defended in public discourse. Semiotics does not advocate a particular theoretical perspective beyond pragmatism, the thesis that for ideas to be meaningful they must have effects in the world. Semiotics is thus a special kind of unification theory, one that embraces epistemic disunity within ontological unity (Preucel and Bauer 2001).

Up to this point, archaeological engagements with semiotics have been dominated by Saussurian and Lévi-Straussian structuralism and the various poststructural critiques that these approaches have engendered. This is perhaps best exemplified by the prominence of the text metaphor in some postprocessual writings. However, it is also important to note that structuralism has also been influential in processual archaeology. For example, Schiffer (with Miller 1999) adopts Saussure’s speech circuit model to describe the communicative process. He develops a formal model that proposes that each interactor plays three major roles, as sender, emitter, and receiver, and these roles typically involve performances with artifacts. For him, archaeology needs to explicate person-artifact relationships. This account, however, fails to address ideology and power in the semiotic mediation of culture. Renfrew (1994a) now accepts the postprocessual thesis that material culture has an active role in society. When it functions as a constitutive symbol, it is not simply representing something, but actually doing something. For him, material symbols often take precedence over immaterial symbols, such as words, because of their physical reality. This is a legitimate critique of Saussure’s dyadic model of the sign, but it doesn’t consider how words and things articulate with one another in strategic discourse.

Saussure’s structuralism is incomplete in several important respects. Because it focuses on pre-established, fixed codes shared equally by an ideal speaker and an ideal hearer, it neglects the practical dimensions of speech dynamics in daily use. It attempts to establish linguistic value solely based upon difference without considering the constitutive potential of meaning and practice. This deficiency is the focus of several poststructuralist critiques. For example, Giddens (1984) has drawn attention to the recursive nature of agency and structure in his structuration theory. Bourdieu (1977) has emphasized how habitus articulates with doxa. However, both of these approaches fail to consider materiality, how people use objects to mediate their social existence. This lacuna can be seen as a legacy of structuralism. According to Myers (2001:22), the doctrine of the arbitrariness of signs has caused us to overlook the material properties of things.
Archaeology has much to gain from a consideration of the version of semiotics developed by Charles Sanders Peirce. Toward this end, I have drawn attention to pragmatic anthropology as the field that has elaborated the application of Peircian semiotics to cultural issues to the greatest degree (Preucel and Bauer 2001). Its major contribution has been its pragmatic view of culture and its commitment to understanding the culturally specific ways in which sign relations mediate social being. Signs function not simply to represent social reality, but also to create it and effect changes in that reality. Signs have agency by virtue of their ability to generate other signs. The control of this process via strategic action permits the fixing of meanings, as sign combinations come to be interpreted together as semiotic ideologies. And yet, these strategies come with certain risks since semiotic ideologies can always be questioned and challenged. Meaning is always unstable and constantly under negotiation.

A Peircian approach possesses certain advantages over its Saussurian rival (Parmentier 1994:xiii–xiv). Saussure emphasizes dichotomies, such as signified and signifier, langue and parole, diachrony and synchrony, paradigmatic and syntagmatic, and internal and external language. These dichotomies imply only the oppositional relation of difference. Peirce, in contrast, focuses on trichotomies, such as Firstness–Secondness–Thirdness, sign-object-interpretant, and icon-index-symbol. These trichotomies embrace the dynamics of mediation. Saussure consistently emphasizes the general and rule-based side of his dichotomies. For example, he stressed signifier over signified, langue over parole, synchrony over diachrony, paradigmatic over syntagmatic, speech over writing. Peirce regards his trichotomies as irreducible and derived from his theory of categories. According to Parmentier (1994:xiv), “Saussure has come to represent the status quo, immaterial abstraction, totalizing rules, and false equality, while Peirce stands as the champion of self-critical reflexivity, worldly engagement, and dialogic alterity.” While this characterization may be somewhat overstated, the implication here is that those poststructuralist approaches that critique Saussure, but retain a version of his sign theory, are similarly compromised because of their inability to delimit the semiotic regimes and modalities implicated in the social production of value.

A Peircian approach also holds considerable potential to revolutionize some of the key topics in cognitive archaeology. Deacon (1997), for example, has argued that one of Peirce’s most original insights is that the difference between modes of reference can be understood in terms of levels of interpretation. That is to say, reference is fundamentally hierarchical with more complex forms built up from less complex ones. Symbols contain indexes which, in turn, incorporate icons. For Deacon, the difference between humans and other primates is the symbolic threshold that permits language. Crossing this threshold involves a change in mnemonic strategy from associative to symbolic predictions. Similarly Noble and
Davidson (1996) have also focused on the issue of reference and proposed that the transformation from icon to symbol is important in understanding language origin. They suggest that iconic calls and gestures, which are rare in primates but common in humans, may have been the source of the evolution of language-like behavior among the early hominids.

Peirce’s sign typology permits the discrimination of different sign modalities with reference to different interpretants. It allows important distinctions to be made between signs that mean something to the analyst (such as a sequence of pottery styles to represent a historical process – a symbolic argument), signs that mean something unique to a past actor (such as a particular pottery design used to represent a social affiliation – a dient indexical sinsign), and signs that mean something that is widely shared within a past community of actors (such as a particular pottery design used to refer to a specific ideology – a rheumatic indexical sinsign). It distinguishes between laws and generalities (legisigns) and specific instances of their realization (sinsigns). In some cases, the meanings of the analyst and past actor may converge, but this is not necessary and the degree to which this is the case will depend upon the goals of research. Peirce’s sign typology thus addresses Hodder’s (1994:73) concern regarding the possibility of creating a semiotic schema for incorporating referential, aesthetic, and experiential meanings (c.f. Molino 1992).

In addition, a Peircian approach offers a perspective on social identity that in many ways anticipates developments in contemporary social theory. Peirce suggests that personal identity is not limited to bodily consciousness. Rather, it extends to “social consciousness” by which a person’s spirit is “embodied in others, and which continues to live and breathe” (Peirce Edition Project 1998:3). A person’s self thus has two aspects. It encompasses what he or she is saying to him or herself over the flow of time. This resonates closely with Bakhtin’s (1981) emphasis on the dialogic encounter as the fundamental character of the linguistic sign. In addition, a person’s self is the product of all the social relations in which that individual is engaged. Daniel (1984) has emphasized this aspect in his study of Tamil society where the self is simultaneously a distributed and an individuated category. This view is in some ways similar to the “dividual” approach of Strathern (1988) where personhood is partible, made up of the social relations in which they reside. This means that groups become homologues of the singular and vice versa.

On Chains and Cables

A Peircian semiotics holds several implications for archaeological reasoning and interpretive adequacy. Here it is useful to compare and contrast the famous chain
and cable metaphors. The chain metaphor can be traced to the classical and medi-

eval concept of the “Great Chain of Being” (Lovejoy 1936). This is the view that

all of existence can be ordered in terms of degrees of perfection from the highest
to the lowest and least complete. The top of the chain represents perfection and
this is often associated with God. The bottom of the chain represents the least
possible perfection, which is nothingness. Descartes applied the chain metaphor
to describe scientific reasoning. In his first Meditations, he argued for an axiomatic
method that involves the building up of a chain of inferences through successive
deductive arguments (Descartes 1998). An axiom is thus the proper starting point
for a chain of deductive reasoning leading to secure knowledge.

The chain metaphor is pervasive in archaeological interpretation. It is well
expressed by Chippindale and Taçon (1998:92) who hold that “we work by chains
of logic: from observation $x$ of the evidence we develop proposition $y$, and from
that there follows deduction $z$. Each is a link in a chain of reasoned deduction.”
They continue to say that the longer the chain the greater the chance of error
due to the accumulation of partially correct arguments. This is because, “neither
archaeological observation nor archaeological deduction is usually secure with any
real certainty: a lengthening chain of reasoning accumulates the weaknesses in its
numerous links” (Chippindale and Taçon 1998:92). The implication is that there
is an interpretive economy and that simpler explanations are more reliable than
complex ones. This, of course, is the basis of Ockham’s Razor which holds that one
should not make more assumptions than the minimum needed. This principle is
sometimes called the principle of parsimony.

Some postprocessualists have also made use of the chain metaphor. Tim Yates
(1990), for example, discusses “chains of signifiers” in his critique of Hodder’s
account of the text model. He writes that “as defined by Hodder, the archaeological
record is a web of similarities and differences from which is built up the network
of meaningful associations through which we know the past. The concept of the
text, of course, serves to denote the epistemological shift away from the identity
(passive) of the ‘record’ to the networking (active) of differences. The emphasis is
placed upon the chains of signifiers, making any particular item or artefact referent
to the other signifiers with which it is articulated” (Yates 1990:154). He then
asserts that Hodder’s emphasis on context is an attempt to close down the chain
and limit interpretation. He characterizes this move as follows: “We decentre the
archaeological text, rendering its component parts only differential marks with a
system of differences, only to panic at the prospect and to recentre that text on an
element that escapes this movement – for context cannot, to perform its promised
function, itself be a part of the movement it serves to forstall” (Yates 1990:155).
For Yates, following Derrida, all archaeology is inadequate since there is no past to
be deciphered in the present; there is no original meaning that the archaeologist
can uncover. There are only chains of signifiers articulating with further chains of signifiers in an endless sequence.

There are, however several assumptions underlying the chain metaphor that can be questioned. The first is that archaeological reasoning proceeds in a linear fashion to bear upon some problem. It can be argued that the signifiers constituting the chain are not only related to the signs coming before and after them, but also collaterally to signs existing alongside them. The strength of the chain is thus bolstered by these supplemental connections. The second assumption is that the chain is compromised by weak links. If the chain incorporates collateral links then it can withstand weak links since they would carry the strain. No single chain then need link all signifiers since parallel chains can supplement it. The third is that the shorter the chain the more secure the knowledge. This thesis fails since the strength of the chain is not only related to the direct links, but also to the number and kinds of collateral linkages. The fourth is that constraining the chain by focusing on context or materiality is somehow illegitimate. This view, derived from a strict reading of Derrida, neglects that although semiotic ideologies are continually produced in the present, it is possible to identify preexisting ideologies which characterize past social orders.

Peirce’s cable metaphor is an important alternative to the chain metaphor. Peirce develops this metaphor in a sophisticated analysis of the logic of scientific explanation. He suggests that science should “proceed only from tangible premises which can be subjected to careful scrutiny, and to trust rather to the multitude and variety of its arguments than to the conclusiveness of any one” (5.264). He then continues to say that “its reasoning should not form a chain which is no stronger than its weakest link, but a *cable whose fibers may be ever so slender, provided they are sufficiently numerous and intimately connected*” (5.264, my emphasis). Peirce does not clarify how numerous or how intimately connected the fibers need to be. Presumably, the issue is whether a particular theory has an effect upon the scientific community. Nonetheless, this is an important contribution to the logic of reasoning and a significant improvement over the chain metaphor.

Richard Bernstein (1983) has developed the cable metaphor in his discussion of epistemic skepticism and human fallibilism. He writes that “Peirce criticizes the picture of scientific reasoning that represents it as a linear movement from premises to conclusions or from individual ‘facts’ to generalizations. In its place, he emphasizes the multiple strands and diverse types of evidence, data, hunches, and arguments used to support a scientific hypothesis or theory. Any one of these strands may be weak in itself and insufficient to support the proposed theory, but collectively they provide a stronger warrant for rational belief than any single line of argument — like a strong cable that is made up of multiple weak strands” (Bernstein 1983:69). He then extends this cable analogy to an analysis of
the diverse philosophical approaches of Gadamer, Habermas, Rorty, and Arendt and concludes that they are “not a babble of incommensurable languages,” but rather a “coherent, powerful conversation that has direction” (Bernstein 1983:225). He suggests that each philosophy contributes significantly to the movement beyond objectivism and relativism both in theory and in practice.

Alison Wylie (1989) has proposed Peirce’s cable metaphor along with Geertz’s (1976) tacking model as means of reconceptualizing archaeological interpretation.82 She begins with Geertz distinction between experience-near and experience-distant concepts. The former refers to concrete terms that all members of a culture use to understand their own actions and beliefs on a daily basis. The latter refers to abstract concepts related to cultural representation that may not be intelligible to all members of a culture. The goal of anthropological inquiry is thus to provide an account of how abstract, general concepts can account for concrete, local practices (Wylie 1989). Interpretation thus involves a dialectical tacking between their experience-near concepts and our experience-distant ones. Geertz (1976:236–237) describes this tacking as something like grasping a proverb, seeing a joke, or reading a poem.

Wylie (1989) observes that there are at least two additional dimensions, not discussed by Geertz, on which tacking occurs. Interpretation involves tacking between our own experience-near and our own experience-distant concepts since our theoretical ideas do not exist in a conceptual vacuum. This is paralleled by tacking between their experience-near and their experience-distant concepts. This implies that anthropologists should be interested in the experience-distant concepts that inform other people’s cultural practices, that is, how they account for things in the world. For her, interpretation is necessarily bidirectional on all axes (vertical, horizontal, and diagonal).

The tacking model can be diagrammed as follows (Figure 10.1). The dotted boxes refer to the anthropologist as subject and the native person as co-subject. Within each dotted box are arrows (a, b) which indicate dialectical tacking between experience-near and experience-distant concepts for both subject and co-subject. There is also dialectical tacking across experience-near concepts (c) and across experience-distant concepts (d). Between the dotted boxes are diagonals that represent dialectical tacking between subject side experience-distant and co-subject side experience-near concepts (e), as well as tacking between experience-distant and experience-near concepts (f). Wylie suggests that incompatibilities between subject and co-subject concepts are sometimes mediated by a concatenation of cables of arguments across these dimensions.

The Peircean view also provides an alternative perspective on the issue of the testing and verification of knowledge. One of the problems with the standard Popperian methodology has been that it was always unclear as to how many
negative results were necessary in order to falsify a theory. Does it require one or ten negative findings? Are there such things as decisive tests? What restrains the invocation of the *ceteris paribus* clause to insulate a favored theory from critique? This is a particularly important issue in the social sciences since control over variables is significantly more difficult than in the experimental sciences. Because the human sciences are a social practice, it is always possible to preserve a theory by ad hoc arguments and calls for additional testing.

Peirce approaches the problem of verification from the perspective of his pragmatic maxim. He shifts the burden of testing away from the outcome of a single study conducted by one scientist to the outcome of multiple studies conducted by the scientific community. Truth is thus not an absolute, but rather a never-ending social inquiry and its status is rendered by the scientific community not at any particular moment in time, but in the long-run. In the case of Wylie’s tacking model, archaeological truths are interpretive statements constructed of multiple strands of evidence and different lines of argument. As she argues, it is highly unlikely that all of the strands incorporate identical biases. This is grounds for acting as though some interpretations are true even if we cannot conclusively prove them to be so. It is also an argument against those postmodern skeptics who hold that we cannot know anything about the past.

### Integrating Words and Things

One of the most challenging topics for archaeological semiotics is specifying the intimate relationships between two kinds of sign vehicles, namely words and things. Should a theory of materiality be subsumed by a theory of language?; Should it subsume language?; or, Should it stand separate from language? What
are the appropriate units of analysis? Material culture does seem to possess certain linguistic qualities such as reference and communication. At the same time, words have a certain material quality, even if it is only ephemeral (Agha 2006).

The application of the linguistic model to material culture has a distinguished history. It was predicted by Saussure’s (1966:17) famous statement that “by studying rites, customs, etc., as signs, I believe that we shall throw new light on the facts and point up the need for including them in a science of semiology and explaining them by its laws.” Lévi-Strauss championed the linguistic approach in his ethnographic studies of myth, totem, and kinship. Barthes (1972), on the other hand, held that there were signification systems parallel to language in his studies of popular culture. Both scholars, however, relied heavily upon the methods of structural linguistics. Lévi-Strauss (1963) proposed the existence of fundamental meaning units in cultural phenomena such as “mythemes” and “gustemes.” Similarly, Barthes (1990) identified “vestemes” as the basic signifying unit in the fashion system.

Leroi-Gourhan (1965, 1968) was the first archaeologist to devise a structuralist model of material culture and symbolic representation. This model was influenced by and was, in many ways, complementary to that of Lévi-Strauss (White 1993:xvi). At the same time Deetz (1967) proposed a homology between language and artifacts whereby artifact patterning might be seen as produced by the same structuring principles. Like Lévi-Strauss, he proposed fundamental meaning units, specifically factmemes and formemes. Muller (1977) advocated a transformational approach based upon Chomsky’s generative grammar. Washburn (1977), Conkey (1978), and Fritz (1978) all offered structural approaches to the processual study of information exchange. Hodder (1982c) combined symmetry analysis with a transformational approach in order to identify material culture boundaries. Friedman and Rowlands (1978), and Leone (1977, 1978, 1984) adopted structural Marxism to examine the uses of ideology and the evolution of prestige systems.

From the very beginning of postprocessual archaeology, there was considerable skepticism regarding the empirical sufficiency of the language model. Much of this skepticism was due to the internalization of the poststructuralist critique. Miller (1982), for example, questioned the applicability of syntax, semantics, and pragmatics to the study of material culture. Similarly, Wylie (1982) argued that the linguistic analogy holds primarily at the level of the encoding process and meanings and astutely recognizes that a mediating competence may govern the structuring of material culture. Independently, Wynn (1993) has argued that the linguistic model is inappropriate since there is nothing like syntax for material culture.

The most sophisticated comparisons of linguistic and material culture meanings were offered by Shanks and Tilley, and Hodder. Shanks and Tilley (1987a) noted that material culture is simultaneously simpler and more complex than written
or spoken language. It is simpler in the sense that the syntactic linkages are more explicit and more complex due to its polyvalence. They noted that material culture as a sign system takes on an ideological dimension when it is articulated in social strategies. Similarly, Hodder (1987b) observed that material culture meanings violate Saussure’s arbitrary principle of language because their materiality often plays a role in referencing. In addition, he noted that material culture differs from language in the non-discursive and subconscious nature of its meanings, their polyvalent, polysemic, and ambiguous character and their durability.

This disanalogy led Hodder (1986b, 1988) to embrace the idea of material culture as text. He introduced this approach to emphasize that material culture meanings are contextually generated through practice as texts become co-texts. He advocated the text approach because it is sensitive to how symbolic meanings articulate with power relations. There is thus a hierarchy of meanings as some people come to control the modes of representation. Tilley (1991) extended the text approach to stress the active role of the reader in interpretation. For him, although material culture does not communicate in the same way as language, it is structured in an analogous manner. This perspective is similar to Barthes’s (1977) and Derrida’s (1978) view and has inspired a consideration of the social and political implications of “writing the past in the present” (e.g., Baker and Thomas 1990).

The text approach has come under considerable criticism from both processualists and postprocessualists. It is considered by some to neglect agency and structure, to ignore the material character of the archaeological record, and to be overly focused on meanings. However, many of these critiques miss their mark since it can be argued that entextualization and contextualization are central practices in the constitution of the social order. As Silverstein and Urban (1996:1) have noted, texts are momentary precipitates of continuous cultural processes. What is lacking then in the current textual approach is a consideration of how texts are produced, circulated, and redefined. There is insufficient attention paid to how certain social practices composed of words and things come to be selected, combined, and valued in different representational regimes.

Although the language model may be an inappropriate model for material culture, language and semiotic principles are implicated in several ways. First of all, we cannot avoid the fact that material meanings are articulated through language. We routinely communicate about how to make things and how they should be interpreted. Moreover, linguistic devices, like deictics, have their analogue in material culture. In precisely the same way that words like “I” and “you” signify the existence of a speaker, so too do artifacts signify the existence of a past maker. Stone tools became artifacts rather than “fulgurous exhalations” only after scholars like Michele Mercati recognized them as the products of human manufacture.
This referential property is indexicality and it is the starting point for all semiotic analysis of material culture. Because of the hierarchical nature of reference, it is possible to begin with indexes and work upwards toward symbols to isolate their motivational properties and downwards toward icons to identify their isomorphic characteristics. The challenge for linguistics and archaeology alike lies in recognizing the specific modes of signification entextualized by other cultures, past and present.

Second, words and things are intimately associated by means of social practices that constitute different semiotic or representational regimes. These regimes are the arenas where discursive and material practices become entextualized, contextualized, and detextualized. Appadurai (1986b:21) calls these arenas “tournaments of value” and suggests that what is at stake is not only status, rank, or fame, but also the disposition of the central tokens of value for the society. A key issue is how different representational regimes constitute cultural notions of time and space. A temporally focused practice is a social practice in which time and temporality are the socially relevant features. Similarly, a spatially focused practice is a social practice where space and spatiality are the distinctive features. In actuality, these practices are closely interlinked since social orders are constituted in space and time (Gosden 1994; Parker Pearson and Richards 1994).

It would seem then that there can be no single, self-contained theory of material culture (Conkey 1999:141; Hodder 1994:73). Rather, there must be theories of social practice devoted to the study of how agents deploy material and linguistic media toward semiotic ends. These social practices are composed of signs, but they do additional work beyond simply designating objects. According to Foucault (1973:49, his emphasis), “it is this more that renders them irreducible to the language (langue) and to speech. It is this ‘more’ that we must reveal and describe.” Recent attempts by Schiffer (with Miller 1999), Latour (1999), and Olsen (2003) to study this “more” have tended to adopt a dyadic people-thing perspective. This perspective, however, is compromised by its ultimate reliance on the flawed Saussurian model of the sign. A more productive approach is to consider social relationships as mediated by things in a triadic relation where people, things, and words in various combinations can all function as signs, objects, and interpretants depending upon the semiotic context.

The term materiality is perhaps best used to describe the “agency quality of things.” The imbrications of selves, words, and things, their very corporality, mobility, and durability, allows actors to extend their agency though time and space. The circulation of kula shells (Munn 1986), Buddhist saint’s amulets (Tambiah 1984), and mamula (Keene 1997), all establish regimes of value that constitute aspects of personhood and society. This is also the case for architectural forms as different as shopping malls (Gottdeiner 1995), Fourierist Phalansteries
(Chapter 8) and Pueblo double plaza villages (Chapter 9). The extension of agency is a central concern for Gell (1998:222) who writes that “a person and a person’s mind are not confined to particular spatio-temporal coordinates, but consist of a spread of biographical events and memories of events, and a dispersed category of material objects, traces, and leavings, which can be attributed to a person and which, in aggregate, testify to agency and patienthood during a biographical career which may, indeed prolong itself long after biological death.” Peirce adds to this the idea that agency acquires its particular meaning when it becomes habitual. This view is strikingly similar to Bourdieu’s (1977) notion of *habitus*, a semiconscious structuring structure, which acts back on the actor in a recursive process (see Daniel 1984). It is in this sense then that material culture is “mind hidebound with habit.”

**Semiotic Ideologies**

All semiotic relationships depend on semiotic ideologies for their power and force. Semiotic ideologies can be understood as the basic assumptions about what phenomena count as signs and how they function in the world (Keane 2003:419). They are expressed through entextualization, the ongoing social practices of negotiation, contestation, and dispute resolution. As Voloshinov (1973:23) put it, the sign is “an arena of the class struggle.” The openness of signs to alternative interpretations perpetually threatens to destabilize existing semiotic ideologies. Material signs, by virtue of their material qualities and associations, have the potential to fix meanings and create a sense of stability and timelessness.

On the surface, nothing might seem more dissimilar than utopian socialists of 19th-century New England and rebellious Pueblo Indians in 17th-century New Mexico. And yet, several points of comparison can be drawn out. Both the utopian socialists and the Pueblo people developed coherent societal responses to hegemonic political economies. In the former case, the Brook Farmers were responding to the growth of industrial capitalism and its anti-humanist practices. Of particular concern were the pressing national issues of abolitionism, labor associations, temperance, Grahamism, and women’s rights. In the latter case, the Pueblo people were reacting against a wholesale attack upon their culture and livelihood by the Spanish empire. This included such exploitive practices as *encomienda* and *repartamiento* as well as religious persecution.

Both the Brook Farmers and the Pueblo Indians established new semiotic ideologies that reinterpreted the relation of the individual and society. George Ripley and the leaders of the Brook Farm community sought to create a new kind of individual, one whose spiritual nature would develop in an environment removed from
competition and the inequities of the day. Selfhood would flourish in communal expression. He proposed to accomplish this goal by reconstituting intellectual and manual labor. Transcendentalism, and later Fourierism, provided the ideological basis for this movement, even as they led to unanticipated contradictions. Popay and Alonzo Catiti, and the other leaders of the Pueblo Revolt, created a powerful revitalization movement expressed in popular discourse as “living in accordance with the laws of the ancestors.” Their goal was to establish a new kind of community, different from that which existed during Spanish rule and related to those that existed prior to Spanish colonization. However, their behaviors immediately following the revolt, such as the demanding of tribute from individual villages, indicate their reluctance to give up their newfound power and authority.

Both the Brook Farmers and the Pueblo Indians selected architecture as a central medium in the constitution of their respective social orders. The eclectic styles of the six original Brook Farm houses – the Hive, the Eyrie, the Cottage, the Pilgrim house, the Workshop, and the Greenhouse – perfectly captured the spirit of Transcendentalism. However, Ripley’s decision to build a phalanstery posed a contradiction with the existing housing stock. Its rigidity and formalism were seen as restricting the freedoms and spontaneity that had characterized life prior to Fourierism. There was considerable unrest in the community due to the admission of tradesmen and women and some members left. This Transcendentalist sensibility was engendered in part by the agency of the original buildings, which actively promoted certain habits of thought and social practices. In this way, the buildings actively resisted the community’s full transition to Fourierism.

Following the revolt of 1680, El Zepe and other Cochiti leaders founded the new mesa village of Kotyiti as an architectural sign of the revitalization discourse. Its double plaza form with its strategically located gateways encoded cosmological principles indexing the Cochiti worldview thus making material a new form of temporality. The double plazas also indexed the moiety social organization which at Cochiti Pueblo today is represented by the Turquoise and Pumpkin kivas. Similar double plaza pueblos were established at Patokwa and Boletsakwa in the Jemez district and built by the Jemez and the Jemez/Santo Domingo people respectively. These pueblo groups share similar cosmologies and social organization with Cochiti, so a similar interpretation of the meaning of the double plaza pueblo likely applies. The double plaza pueblos, however, were not used in the Hopi and Zuni districts. These pueblo groups do not share the same cosmologies and social organization with the Northern Rio Grande pueblos. This suggests that the Hopi and Zuni people championed their own versions of the revitalization discourse which were expressed differently.
Toward a Pragmatic Archaeology

With the turn of the millennium, debate has intensified over the disciplinary status of American archaeology and its foundational relationship with anthropology. Much of this debate has centered on the contemporary relevance of the “four-field approach” established by Franz Boas. In 1904, Boas (1904:513) identified anthropology’s domain as consisting of “the biological history of mankind in all its varieties; linguistics applied to people without written language; the ethnography of people with historic records and prehistoric archaeology.” This is the standard rationale for the integration of archaeology, biological anthropology, cultural anthropology, and linguistics.

The touchstone for this reevaluation was the split of the Department of Anthropology at Stanford University in 1998 into two separate departments, the Department of Anthropological Sciences and the Department for Cultural and Social Anthropology. This split took place on epistemological rather than subdisciplinary lines with the former department advocating positivism and the scientific method and the latter hermeneutics and interpretative methods. The entire profession took note and wondered whether this was a precursor of things to come. In 2000, Deborah Nichols, Susan Gillespie, and Rosemary Joyce organized a session at the Society for American Archaeology meetings entitled “Archaeology is Anthropology.” A year later, T. Douglas Price organized a forum at the SAA entitled “Archaeology is Anthropology” and William Longacre gave the Archaeology Division a distinguished lecture at the AAA meetings entitled “Archaeology as Anthropology Revisited.”

Much of the debate is predicated upon a particular view of disciplinarity, how academic disciplines emerge and reproduce themselves (Gosden 1999:33). The standard view assumes that academic disciplines are organized according to the more or less ‘natural’ categories of things that we call subjects. The idea is that disciplines have relatively fixed boundaries such that all growth is contained within the discipline and not destructive of it. This characterization justifies the establishment of departments, hiring lines, professional societies, and academic journals.

Recently, this disciplinary view has been called into question. Foucault, for example, has highlighted the dual meanings of the word discipline to refer to a structured area of inquiry and to certain habits of thought that are hard to identify and transcend (Gosden 1999:35). There is now a move toward interdisciplinarity (Moran 2002). Disciplinary boundaries are no longer regarded as impermeable and intendisciplinary programs are becoming more common. For example, topics that were traditionally regarded as the purview of cultural anthropology have now been taken up by Cultural Studies, Women’s Studies, Gender Studies, African
American Studies, Native American Studies, etc. This situation has sometimes been interpreted as a loss of control over the cultural subject. I prefer to think of it as the success of the anthropological project, which is committed to the broad dissemination of ideas about culture.

The contemporary critique of anthropological archaeology exists within this context. Geoffrey Clark (2003:58) has suggested that a wavering commitment to anthropological holism has led to the increasing specialization of the subfields where there is little cross-fertilization and a limited tolerance for eclecticism. He argues that archaeologists should select from the “more materialist bands of the anthropological spectrum” because anthropology has no overarching framework against which its “normal science” can be evaluated (Clark 2003:59). Similarly, but from a different theoretical perspective, Hodder (2005:138) has suggested that the holistic view of the four-field approach has been replaced by strategic alliances between specific anthropological interests. This implies quite separate fields that can each come to the table as equals in debate. Finally, there has been a small, but vocal, contingent within archaeology that has long argued for free-standing departments of archaeology such as those Richard McNeish established at Boston University and the University of Calgary (Wiseman 1980, 2001). The basis for this argument is that archaeology properly transcends anthropology to integrate such fields as art history, classics, Egyptology, etc.

An alternative way to conceptualize archaeology is to define it as the study of the constitution of culture and society by means of the human material engagement with the world. The relationship with anthropology, broadly conceived, cannot and should not be discarded, for the simple reason that ethnographic analogy, in its various forms, remains the basis for all interpretation. All interpretation involves establishing and evaluating analogical cables or threads linking known and unknown cultural contexts. These threads are then rewoven into interpretive tapestries in an ongoing semiotic process of entextualization and contextualization. But this characterization does not mean that archaeology need be limited by boundaries of contemporary anthropology. Like Peirce’s notion of self, archaeology has a distributed identity that engages with all other fields that relate to human understanding. From this perspective, a pragmatic archaeology focusing on materiality has the potential to reinvigorate anthropological practice and to contribute to semiotic studies more generally by integrating issues previously deemed the sole domain of individual disciplines and subfields.
Chapter 1

1. I largely confine my discussion of archaeological semiotics to Anglo-American archaeology since this is the case that I know best. However, I am convinced that my arguments are equally applicable to world archaeology.

2. Indeed, Margaret Conkey (1989:153) has argued that structuralism is a cultural practice which, of course, implies the same for structural archaeology. Similarly, Ian Hodder (1999) has drawn attention to the archaeological process as a form of intellectual engagement.

3. Semiotics is a huge field and it is impossible to do it justice in this brief introduction. For basic overviews see Anderson et al. (1984), Deely (1982, 1990), Eco (1976), Hawkes (2003), Nöth (1990), and Sebeok (1991a, 1991b, 1994).

4. Conkey (1989:147) has speculated that this delay may be due to the “hard positivist armor” of processual archaeology.

5. This review is not intended to be exhaustive. There are several important European conferences that are not covered (see Nordbladh 1978).

6. The participants included Mary Braithwaite, Steven Cogbill, Sheena Crawford, Linda Donley, Ian Hodder, Paul Lane, Daniel Miller, Henrietta Moore, Ellen Pader, Michael Parker Pearson, Alison Sheridan, Christopher Tilley, and Alice Welbourn. Many of these individuals have become leaders in contemporary British archaeology and anthropology.

7. An even earlier critique of the linguistic model was offered by the linguist Dell Hymes (1968, 1970). In a review of Jon Muller’s and James Deetz’s work, he questioned the applicability of linguistic formalism and suggested instead the use of logical and mathematical approaches.
8. Michael Herzfeld, a social anthropologist at Indiana University, was particularly interested in archaeology and had studied at Cambridge under David Clarke.

9. This conference was highly politicized due to the tensions between academic freedom and sanctions against apartheid (see Hodder 1986a; Ucko 1987).

10. There are very few considerations of pragmatism and archaeology and none engage with Peirce in any depth (Gaffney and Gaffney 1987; Reid and Whittlesey 1999; Saitta 2003).

Chapter 2

11. Saussure’s biographical information is taken from Mounin (1964), Culler (1986), and Morpurgo Davies (2004). There is, as yet, no comprehensive biography of his life. For an annotated bibliography see Koerner (1972).

12. This discussion of Saussure’s sign is abstracted from Holdcroft (1991) and Joseph (2004).

13. Roy Harris translates these terms as “signification” and “signal” respectively (Saussure 1983:67).

14. There is a longstanding debate about whether Valentine Voloshinov or his close friend and associate, Mikhail Bakhtin, authored the works sometimes attributed to Voloshinov (see Morson and Emerson 1990:101–119).

15. For an archaeological engagement with Bakhtin see Joyce (2002).

16. Interestingly, Claude Lévi-Strauss directs his critiques at the editors of the *Cours* and not directly at Saussure himself. He writes “the master’s thought has at times been forced and schematized by the editors of the Course” (Lévi-Strauss 1976:16).

17. The term “symbolic anthropology” was coined by James Peacock and several of his colleagues in 1975 (Peacock 1975).

18. Paul Bouissac (2004:260) has speculated that a new, more coherent understanding of Saussure’s vision may emerge once his writings are published in a chronological edition and no longer seen through the prism of the Course.

Chapter 3

19. The convention for citing quotes from the eight volume set of Peirce’s writings published by Charles Hartshorne, Paul Weiss, and Arthur Burks (1931–1958) is for the number to the left of the decimal point to refer to the volume and the number to the right to refer to the numbered section in the text.

20. Peirce’s biographical information is taken from the introductions by Max Fisch and Nathan Houser to the chronological edition of Peirce’s writings.

21. Peirce apparently formulated the doctrine of pragmatism in 1873 (see 6.490).

22. Peirce considered his theory of categories to be his greatest contribution to science (Brent 1998:70). It was first published in his paper entitled “On a New List of Categories” (Peirce 1867).

23. I differ with Short (2004) who has argued that Peirce’s sign system changed radically over time. Short suggests that Peirce’s early version of the sign was flawed because of its assumption of endless regression and progression and that this was only resolved when he devised the notion of a final interpretant. I believe that the idea of the final interpretant is implied in his early version and that it is the process of semiosis and not the identification of a Final Truth that is crucial.

24. This figure is included in a note to Lady Welby dated December 28, 1908 (8.376).

25. A major exception to this statement is Charles K. Ogden and Ivor A. Richards’s (1923) publication, The Meaning of Meaning. Their triangle of meaning is a modification of Peirce’s tripartite sign relation.


27. Michael Shapiro (1998:2) has argued, incorrectly in my view, just the opposite point, saying that Jakobson’s work makes very limited use of Peircian insights and that this is due to his “ironclad consistency” in analyzing language in terms of binary features.

28. In fact, Thomas Sebeok defines semiosis as the more general activity shared by all animals and representation as the semiotic activity specific to humans (Sebeok 2001:8).

29. This is a useful list of common sign usages, but it can be reduced to Peirce’s sign trichotomy. For example, signals and symptoms are both kinds of indexes. A name is a kind of symbol.

Chapter 4

30. Kant coined the term “pragmatic anthropology” in his last set of lecture notes for his annual course in anthropology, which he taught from 1772 until his retirement in 1796. The lectures were published in 1798 (Kant 1974).

31. Perican semiotics has had much less of an effect upon British anthropology. There are, however, two noteworthy exceptions. Bronislaw Malinowski (1923) cited with favor Ogden and Richard’s (1923) sign triangle, itself derived from Peirce. More recently, Alfred Gell (1998) drew special
inspiration from Peirce via Eco (1976, 1984). This is particularly evidenced by his notion of the “abduction of agency” and his emphasis on the centrality of the index.

32. This view of self is strikingly similar to that of the New England Transcendentalists. John Dwight (1848:170, his emphasis), for example, wrote, “No man is himself, alone. Part of me is in you, in every fellow being. We ‘live and move and have our being’ in one another, as well as in God. An individual is nothing in himself. … We are real persons only entering into true relations with all other beings.” Peirce indirectly acknowledged the influence of New England Transcendentalism on his thinking and wrote, “the atmosphere of Cambridge held many an antiseptic against Concord transcendentalism; and I am not conscious of having contracted any of that virus. Nevertheless, it is probable that some cultured bacilli, some benignant form of the disease was implanted in my soul, unawares” (cited in Brent 1998:46–47, my emphasis).

33. In fact, Milton Singer (1984:184–185) finds the parallelism so compelling that he speculates that Peirce may have even been influenced by Indian thought.

Chapter 5

34. This “linguistic turn” should not be confused with the “linguistic turn” associated with growing influence of logical positivism in the 1960s. This latter movement sought to reduce meaning statements to the rules of language (Rorty 1967).

35. Alvin Weinberg (1967:39), the Director of Research at the Oak Ridge National Laboratory, coined the term “big science” to emphasize that “many of the activities of modern science – nuclear physics, or elementary particle physics, or space research – require extremely elaborate equipment and staffs of large teams of professionals.”

36. Lewis Binford’s (1972:8) interest in positivism is apparently due to Leslie White who encouraged him to read philosophy of science.

37. Carl Hempel was, in fact, a critic of aspects of logical positivism and thus might be called a neopositivist (Wylie 1981).

38. In a footnote, James Deetz states that some of his ideas resulted from conversations with Margaret Mead and Loring Brace (Deetz 1967:87).

Chapter 6

39. Ian Hodder here claims that the role of the icon in language is marginal and is not well studied in linguistic analysis. This is, in fact, not the case (see Silverstein 1976).
40. The text metaphor was a central component of Henrietta Moore’s (1986) dissertation at Cambridge written under the supervision of Ian Hodder. Her view draws upon the work of Paul Ricoeur. Moore (1990) also wrote the chapter on Ricoeur in Tilley’s (1990) edited volume *Reading Material Culture*.

41. Although Ray does not make this connection, “presencing” can be seen as an example of indexicality similar to deictics in language. It points to specific individuals or concepts and thereby incorporates them into the interpretive context.

Chapter 7

42. Colin Renfrew (1994a:5) intends the term “ancient mind” to be a shorthand for the subject matter of cognitive archaeology. He cautions that he is not making a distinction between the ancient mind and the modern mind. But he then goes on to differentiate the problem of the evolution of cognitive abilities across species and the study of pre-modern forms of thought in our own species.

43. Ironically, behavioral archaeology (Reid et al. 1975; Schiffer 1975a, 1976) has very little to do with behavioralism beyond a shared skepticism of nonobservables (Earle and Preucel 1987).

44. Mark Leone (1986) suggests that the work of Deetz, Glassie, and Freidel can be subsumed under the cognitive heading and is antecedent to a cognitive archaeology.

45. It should be noted, however, that not all of the authors contributing chapters to this volume consider themselves to be cognitive archaeologists.

Chapter 8

46. Portions of this chapter have been revised from Preucel and Pendery (2006).

47. This section is largely drawn from the work of Dolores Hayden, who has compared and contrasted the architecture of seven American utopian communities (Hayden 1976).

48. Albert Brisbane was convinced that Fourier was a major social theorist who would revolutionize the human sciences. He writes “Fourier is to be ranked among these bold and original geniuses, like Columbus, Copernicus, and Newton, who open new paths to human science, and who appear upon the stage of the world to give it a new impetus, and exercise an influence, which is to be prolonged for ages” (Brisbane 1840:iv).
49. The first phalanx was the North American Phalanx established in 1843 at Red Bank, New Jersey (Guarneri 1991).

50. Suzanne Spencer-Wood (2006:179) conducted historical research with the West Roxbury Historical Society in 1985 and 1986 to petition the State of Massachusetts to acquire Brook Farm as a park in the public interest.

51. There is one Brook Farm house that I do not discuss. This is the house, known as “the Nest” (Swift 1900:29). This house was not owned by the community, but was rented and used for the school. It also served as a residence for some of the teachers and students.

52. The Hive was a popular symbol for utopian communities since it implied activity for a common cause. It is still used today by Mormons.

53. Mrs. Barlow had separated from her husband, David Hatch Barlow, a Unitarian minister and was a permanent boarder (Delano 2004:82). She has been called Brook Farm’s “femme fatale” because of her influence on John Dwight and Isaac Hecker (Delano 2004:113).

54. The Harbinger was transferred to New York under the American Union of Associationists from 1847 to 1849 (Delano 1983).

55. John Thomas Codman’s reference to 300 yards is clearly a mistake for 300 feet since Pendery’s (1991) archaeological research has identified the location of the cellar hole.

56. Ephraim Capen may have been related to Lemuel Capen, an Unitarian minister, who had become a member two years previously. After the community disbanded, Ephraim Capen relocated to New York and took George Molineau as a partner to form Capen and Molineau.

57. Much of this section is based upon the research of Nancy Osgood (1998), a member of the Brook Farm Hive Archaeological Project.

58. On the back of the painting is a pencil sketch of the Hive and the names of the various buildings. Underneath the name “Phalanstery” are the words “being built” with a drawn line through them. The foundation for the Phalanstery was dug in July of 1844. The Massachusetts Historical Society gives a date range of 1844–46.

Chapter 9

59. Anthony Wallace (1956) actually uses the term “mazeway,” which I have glossed as “a people’s worldview.”

60. The Vaqueros were probably plains buffalo hunters, such as the Comanche.

61. Fray Angelico Chavez (1967) has put forth the controversial thesis that the leader of the revolt was a black man or mulatto named Domingo Naranjo.
from Santa Clara Pueblo. This view has been rebutted by Stefanie Beninato (1990).

62. Francisco Tanjete is also known as Francisco El Ollita (Hackett and Shelby 1942(2):241).

63. This is a composite list compiled from the questions used during Antonio de Otermin’s reconquest attempt in 1681 (Hackett and Shelby 1942).

64. Vetancurt (1982) locates the lake of Copala in the province of Jalisco, Mexico.

65. This section is revised from Preucel et al. (2002).

66. Horn Mesa and its archaeological sites have been known by several different names and this has been the source of some confusion in the literature. For the Cochiti people, the entire mesatop area, including all of the archaeological sites thereon, is known as Hanut Kot-yi-ti (Cochiti above). Other seemingly interchangeable names include Kot-yi-ti shoma (Old Cochiti), Kot-yi-ti ka-matse shoma (Old Cochiti settlement), K’otyiti haartcittc (Cochiti village), and Hanut katruque (houses atop the mesa) (Harrington 1916:431). The Spanish referred to the village as “La Cieneguilla” and “Pueblo de la Cieneguilla de Cochiti” (the pueblo of the little marsh of Cochiti) and described its location as “La mesa de la cieneguilla de Cochiti” (the mesa of the little marsh of Cochiti) (e.g. Kessell et al. 1995:452). This name has been confused with that of the Pueblo village known as La Cieneguilla (LA 16) which is located southwest of Santa Fe and near the modern Hispanic town of Cieneguilla. By the 18th century, the original Spanish name seems to have been lost and the community was commonly known as “Pueblo Viejo” (Old Pueblo) and the mesa as “Potrero Viejo” (Old Mesa) and also “Potrero de las Casas” (Mesa of the Houses) (Bandelier 1892; Lange and Riley 1966).

67. This trail is likely the “Moon trail” referred to in a Cochiti oral history account (Benedict 1931:186).

68. Unfortunately, Nelson’s fieldnotes and papers do not provide any information on these additional excavations.

69. The revolt split apart many Pueblo families. One of Francisco Tanjete’s brothers was Domingo Luján, who was a Spanish sympathizer (Hackett and Shelby 1942b:263). Similarly, Alonso Catiti’s brother, Pedro Márquez, served as a captain in Vargas’s army (Hackett and Shelby 1942b:261).

70. This village is known as Old San Felipe or Basalt Point Pueblo (LA 2047). It is unique among the mesatop villages of this period in that it was occupied by both Indians and Spaniards. There is a church in the northeast corner of the village (Lange et al. 1975:69).

71. The Keres worldview is quite similar to that of the Tewa in terms of its ordering of the cardinal directions (see Ortiz 1969).
72. On the basis of direct historical analogy with the modern Pueblo of Cochiti, the east kiva can be identified as the Turquoise kiva and the west kiva as the Pumpkin kiva (Lange 1990).

73. It is not yet established whether these outlier rooms are residences or special purpose structures.

74. This section is revised from Capone and Preucel (2002).

75. Historical sources indicate that at different times seven different Tewa and two different Tano villages were represented on the mesa (Kessell et al. 1998:116, 117). The Tewa villages were San Juan, San Ildefonso, Santa Clara, Nambe, Pojoaque, Cuyamungue, and Jacona; the Tano villages were San Cristobal and San Lazaro.

76. We make a distinction between motifs and designs. The former are the discrete units from which designs are composed.

77. All glazeware date ranges are from Schaafsma (2002).

78. These sherds were identified in the Mera collection of the Laboratory of Anthropology.

79. Kidder (1931:142) calls this motif a “highly conventional bird” and Harlow (1973:141) calls it the “F Figure.”

80. This section is revised from Snead and Preucel (1999), Preucel (2000a, b), Ferguson and Preucel (2005), and Liebmann et al. (2005).

Chapter 10

81. Peirce actually wrote an unpublished essay on archaeology and documentary history. In “On the Logic of Drawing History from Ancient Documents, Especially from Testimonies” (7.164–7.231), he critiques historians and advocates a hypothesis testing method for the evaluation of historical documents. This essay was written in 1901.

82. Ian Hodder has recently advocated a version of the cable metaphor. He writes, “I have suggested that the variety of scientific procedures used in archaeology can be accommodated within a generalized hermeneutic approach; by this I mean an approach in which the diversity of strands of evidence are brought together in order to construct a whole” (Hodder 1999:116, my emphasis).
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