4

A Linguistic Anthropologist's Interest in Archaeological Practice

Charles Goodwin

In this chapter I will briefly describe what led me, a linguistic anthropologist, to become interested in archaeological practice (in essence because I don't think one can build an adequate picture of human beings unless you take into account both human language and the social practices through which we transform the environments we inhabit on an extended time scale). I will then briefly describe some of my ethnographic research at archaeological field schools in the United States and Argentina. Finally I will present an example of how archaeologists construct the discursive objects that sit at the heart of their profession (such as features in the earth, maps of those features, categorizations of relevant phenomena, etc.) through socially organized practice that encompasses embodied action, language, and structure in the environment.

In 1976 my wife, Marjorie Harness Goodwin, and I arrived at the anthropology department of the University of South Carolina as their new linguistic anthropologists. The same year the department also hired two new archaeologists. This was when the work of Lewis Binford and the theories of Marvin Harris seemed about to usher in a new era of rigorous, empirical science in archaeology. On the other hand, linguistics, under the influence of Chomsky, was increasingly focusing on mental phenomena and competence rather than the messy, degenerate language found in actual talk. My own approach to human language, strongly informed by both linguistic anthropology and the analysis of conversation initiated by the sociologist Harvey Sacks and his colleagues (Sacks 1995; Sacks et al. 1974), was more concerned with the social and cultural organization of talk in human interaction. My data consisted of videos of people talking in natural settings, and I was interested in human language as a form of

public social practice rather than as a symbolic structure located in the psychological organization of the human mind. Nonetheless, one of my most influential teachers, a man I still revere, was Ward Goodenough. He was Marvin Harris's perennial opponent in an ongoing debate (sometimes leading to confrontational sessions at the annual meetings of the American Anthropological Association) about what work should consist of in anthropology. Could serious study of what is important about human beings focus on invisible mental life, emic phenomena, as Goodenough's did, or should it, like archaeology, devote its attention to what could be held, weighed, and measured empirically, and to the larger social processes that had given human societies their distinctive shapes over extended time periods? (By way of contrast I wrote papers about what occurred during the unfolding of a single sentence.)

In retrospect, I believe that the anthropology department at the University of South Carolina was an ideal place to grow intellectually. We included all four fields that make up American anthropology: sociocultural anthropology, biological anthropology, archaeology, and linguistic anthropology. This diversity led to friendly but intense debates between the new hires when we arrived ("you're just mental and emic," etc.). Initially I could ignore such claims about the importance of structure in the material world as irrelevant to my own intellectual interests. However, because we were a small department the entire faculty went to the colloquia of all guest speakers, not just those in their own specialty. Years of such talks provided an ideal way of becoming acquainted with the issues being debated within contemporary archaeological thinking and, more crucially, with what animated the lives of archaeologists intellectually and how they worked and made arguments. The central importance of not only what they were doing, but also how they viewed the world, at last began to sink in.

In essence, archaeologists and linguistic anthropologists took two radically different views of what it means to be human. For those interested in language, it is human language that defines us as a species, differentiates us from all other animals on the planet, and provides the crucial infrastructure for the cultural and cognitive worlds that we inhabit. However, for archaeologists, what defines us as human beings and separates us from all other animals is our ability to structure our material environment in ways that dynamically organize social life on very large time scales. Consistent with such a view, a few cognitive scientists have recently come to recognize the crucial importance of material artifacts, such as maps and tools, in the organization of human cognition in the wild. Hutchins's (1995) analysis of how navigation is accomplished on a naval ship provides an excellent example.

I eventually came to see that while each of these perspectives—one focused on language structure, the other on material structure—offers a crucial insight into what we are as human beings, each perspective is at best a partial truth. Any attempt to adequately describe what it is to be human, and what makes us distinctive as a species, must encompass both. Moreover, such a framework must also take into account how both language and the use of structure in the

environment are organized as collaborative social practice, that is, as something that separate individuals do and use together within a public arena of meaningful action.

To try to work out how the ways in which I had studied language in human interaction could be expanded to include material structure in the environment, I began to do fieldwork and videotaping in a number of tool-saturated work settings, one of which was archaeology. The settings I have investigated include the following: (1) I spent two years (1989–1991) at Xerox's Palo Alto Research Center (PARC) as part of the Workplace Project organized by Lucy Suchman (Goodwin 1996; Goodwin and Goodwin 1996). We focused on work practices in various settings at a medium-sized airport (ground operations rooms, the ramp, the ticket counter, etc.). While there I became much more deeply acquainted with contemporary work in social studies of science, and these perspectives have deeply informed my ethnographic approach to the study of archaeological practice. (2) With the aid of Willard Moore, in 1989 I videotaped the geochemistry lab of an oceanographer in South Carolina (Goodwin 1997) and then in 1990 videotaped the work of a group of oceanographers on a research ship in the mouth of the Amazon (Goodwin 1995). (3) I am currently participating in a project organized by Timothy Koschman focusing on the education of surgeons. The data consists of recordings of operations being performed jointly by a senior and junior surgeon. The senior surgeon wears a small video camera on his or her forehead that provides a record of where he or she is looking and thus of the unfolding surgery. (4) I am part of a project organized by Elinor Ochs at the anthropology department of UCLA that is recording the daily lives of families with two working parents in Los Angeles. In addition to the project's videotaping and interviews (psychological, health, family network, and education), our project team includes several archaeologists who draw maps of each family home, record who is present in each space and what activities they are engaged in at ten-minute intervals throughout the filming, and make an extensive photographic inventory of all objects in the home.

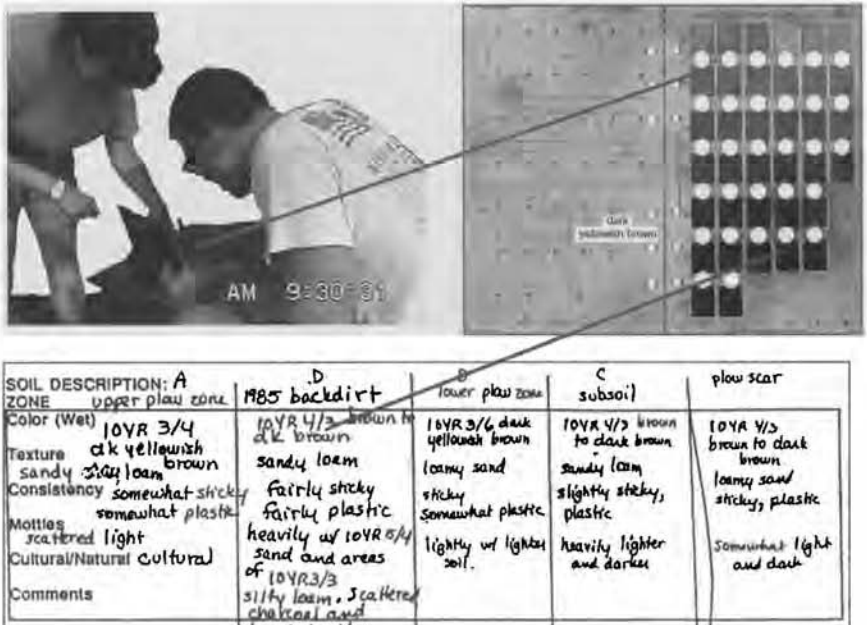
Finally, I have recorded work and interaction at a number of archaeological field excavations and labs (Goodwin 1994, 1999, 2000, 2003a, 2003b). First, with the generous aid of Gail Wagner at the University of South Carolina, Marjorie Harness Goodwin and I recorded students working in Wagner's lab in the fall of 1991 (approximately thirty-four hours of tape); then, we recorded at a series of field schools in South Carolina that she directed in the summers of 1992, 1994, and 1996 (approximately thirty-nine hours of tape); we also recorded briefly at an excavation directed by Stanley South in 1994 (approximately eight hours of tape). Second, in the spring of 1993 I recorded a short field school in southern California directed by Jeanne Arnold at UCLA and some of the lab work that followed the field school (approximately twelve hours of tape). Third, in the spring of 1992, Joan Gero, who was then at the University of South Carolina, and I recorded a week of fieldwork at Arroyo Seco, a site being excavated on the pampas of Argentina by Gustavo Politis of the Universidad Nacional De La Plata

(approximately twenty-four hours of tape). Joan also introduced me to the then unpublished work of Matthew Edgeworth (2003). At the moment I am preparing for fieldwork at two archaeological excavations with Evangelos Kyriakidis. I am deeply indebted to all of the archaeologists and their students who made this research possible by allowing my colleagues and me to record and investigate the details of the work they were doing.

My encounter with archaeology has thus informed my own research in two different, though interrelated ways. On the one hand, sustained exposure to the work and presentations of archaeologists, and to workplace settings, led me to see that in my own research I had drawn an invisible analytic boundary at the skin of the speaking, embodied actors I was investigating, so that material structure in the environment was effectively ignored. I gradually recognized that an adequate perspective on human action had to encompass both multiparty, multimodal embodied language use and the way in which historically sedimented structure in the environment organized human action and social life in local interactions and on large multigenerational time scales. On the other hand, the work practices of archaeologists themselves, during field excavations and in the laboratory[1] has provided a perspicuous site to investigate the consequential organization of embodied action that encompasses both language and structure in the environment. Figure 4.1, in which two young archaeologists are using a Munsell color chart to classify the color of the dirt they are excavating, provides an example.

Color classification has been a major topic in linguistic and cognitive anthropology. The analysis of Berlin and Kay (1969) remains one of the classic works in the field. They demonstrated that underneath the great variety of ways in which different societies segmented and categorized the color spectrum there was a universal pattern. This was visible in the way in which languages added color terms. If a language had only two they would be white and black (or light and dark); the next to be added would be red, followed by green and yellow, and so on. Despite its power, this analysis was based upon a particular geography of cognition, one that located all relevant phenomena within the mental life of the language user, or in the semantic systems of different languages. Berlin and Kay never looked at how people use color categories to pursue a relevant course of action in the consequential scenes that make up their lifeworld. By way of contrast, the archaeologists in figure 4.1 are classifying color because it is a task posed by the work of excavation they are engaged in. Their cognitive activities are embedded within a larger ensemble of work practices that includes not only categories for classifying color but also tools such as trowels, vernacular documents such as the coding form they are filling out, and a Munsell color chart (a physical artifact that transforms the task of color categorization from an entirely mental activity into a process of comparing what is to be classified to a visible standard sample).

I have analyzed how the Munsell chart structures cognition and social action in archaeological excavation in more detail elsewhere (Goodwin 1999, 2000).



17 Pam: En this one. *((Points))*
18 (0.4) *((Moves Trowel))*
19 Jeff: nuhhh?

Figure 4.1. Classifying color with a Munsell Chart

Here a few points will be briefly noted. First, the two archaeologists in figure 4.1 are engaged in very active cognitive work. However, the origins of that cognitive activity are not to be found inside the skulls of the actors but rather within the organization of the larger activity in which their work is embedded. They are intently scrutinizing a tiny bit of dirt because they are faced with the task of filling in a box on a form asking for the color of the dirt. The actions of the senior archaeologist who constructed the form, long before the current actors got to the field site, are organizing in fine detail the perceptual and cognitive activities of those doing the excavation. The way in which the structure visible on the form is constructed through the collaborative work of two different kinds of actors (the senior researcher who constructed the form and the current fieldworkers) occupying quite different social and temporal positions is visible in the contrast between the printed text of the category names and the handwritten entries of the current excavators. The orientation of the current participants to the coding form thus links their local work to distant sites, including both the construction of the form in the past and future use of the form in the lab in the analysis of data and the writing of papers, long after the excavation itself has been shut down.

Second, the Munsell chart itself constitutes a historically structured architecture for perception. With its precise color samples it incorporates into a portable physical object the results of a long history of scientific investigation of the properties of color. It exists not only as a symbolic structure but also as a concrete object constructed in a physical medium, and this is crucial to its organization. Thus a small hole is cut into the paper next to each color patch. The fieldworker using the chart moves a trowel with a small sample of the dirt to be categorized on its tip from hole to hole until the best match with the color of an adjacent patch is found. By doing so she creates what Foucault (1986) calls a *heterotopia*, a juxtaposition of two radically different kinds of space. Actual dirt, a bit of the primordial world that is the focus of the archaeologist's scrutiny, is framed by a theoretical space for the rigorous, replicable classification of color. The mundane moment when this juxtaposition occurs might at first glance seem trivial and quite distant from larger archaeological theory and argument. However, it is precisely here that nature is transformed into culture, or more properly where dirt, the raw material of the world that is the distinctive focus of archaeological investigation, is transformed into the analytic categories and documentary materials (e.g., an entry on the coding form that will be brought back to the lab) that will provide the infrastructure for subsequent analysis, publication, and theory building.

A Munsell page provides not one, but three complementary systems for identifying a reference color: (1) the actual color patch; (2) a page name that specifies hue followed by numeric coordinates specifying a particular patch on the page for that color, for example, "10 YR 3/4"; and (3) color names. These systems are not precisely equivalent to each other. For example, a single color name might include several different color patches and grid descriptions. Thus, on the page reproduced in figure 4.1, the color name "dark yellowish brown" includes four color patches.

Why does the Munsell page contain multiple, overlapping representations of what is apparently the same entity (e.g., a particular choice within a larger set of color categories)? The answer seems to lie in the way that each representation makes possible alternative operations and actions and fits into different kinds of activities. Both the names and numbered grid coordinates can be written and thus easily transported from the actual excavation to the other work sites, such as laboratories and journals, that constitute archaeology as a profession. The outcome of the activity of color classification initiated by the empty square on the coding forms is a set of portable linguistic objects that can easily be incorporated in the unfolding chains of inscription that lead step by step from the dirt at the site to reports in the archaeological literature (see also Hutchins 1995, 123). However, as arbitrary linguistic signs produced in a medium that does not actually make visible color, neither the color names nor the numbers allow direct visual comparison between a sample of dirt and a reference color. This is precisely what the color patches and viewing holes make possible. Moreover, as discrete, bounded places on the surface of the page,

they can be identified not only through language but also by pointing. In brief, rather than simply specifying unique points in a larger color space, the Munsell chart is used in multiple overlapping activities (comparing a reference color and a patch of dirt as part of the work of classification, transporting those results back to the lab, comparing samples, publishing reports, etc.) and thus represents the same entity, a particular color, in multiple ways, each of which makes possible different kinds of operations because of the unique properties or each representational system.

Unlike most other animals, human beings have the ability to secrete cognitive organization into the world they inhabit in ways that create new forms of both knowledge and action, while transforming the environment within which relevant activities are accomplished. The Munsell page is simultaneously a material object and conceptual tool. It relies upon the specific properties of material media to build cognitive structure that could not exist within the confines of the skull, for example, the arrangement of possibilities for color classification into an ordered grid that can be repeatedly scanned, the production of actual reference samples that can be visually compared both with each other and with the material being classified, and so forth. All of these operations depend upon the properties of specific physical objects. However, such objects do not exist, and could not exist, in a pure, natural world, for instance, a domain not structured by human practices. By juxtaposing unlike spaces, but ones relevant to the accomplishment of a specific cognitive task, the chart creates a new, distinctively human, kind of space. Moreover, with its view holes for scrutinizing samples, the page is not simply a perspicuous representation of current scientific knowledge about the organization of color but is also a space designed for the ongoing production of particular kinds of action.

Third, when multiple archaeologists work together, as in figure 4.1, the full resources provided by the organization of talk-in-interaction for shaping intersubjectivity within processes of coordinated action are mobilized. Language structure, the sequential organization of action within temporally unfolding human interaction, the body, and material structure in the environment are seamlessly integrated into the relevant courses of action that constitute the lifeworld of a particular community. In line 17 Pam proposes a particular color patch as the solution to their classification task. Rather than naming the patch she identifies it with a deictic expression: "this one." Deictic terms, which point toward something else (they are also called indexical expressions), require that features of the surrounding context be taken into account for their proper understanding. Pam's action in line 17 includes two different aspects of the physical context. First, her talk is accompanied by an embodied action, a pointing gesture; second, that gesture indexes a particular square on the Munsell chart in front of them. Such environmentally coupled gestures (Goodwin 2003a) build multimodal, multisemiotic, meaning-making packages in which sign systems in diverse media are brought together to create a whole that goes beyond any of its constituent parts.

Pam's proposal makes relevant a response from Jeff, and indeed in line 19 he rejects it. However, there is a significant gap in the talk before he answers (line 18). Rather than being empty silence, that time is occupied by embodied work necessary for the competent production of the requested answer: moving the dirt sample to the hole next to the indicated color patch so that a comparison can be made. This brief sequence offers an opportunity to investigate human culture (the distinctive ways in which a particular social group views and categorizes the phenomena that are the focus of its work and attention), cognition, and social organization from an integrated perspective that includes embodied action, the details of language use, and historically structured physical artifacts. Rather than locating the cognitive properties of color categorization in the brains of individual actors, or the semantic systems of different languages, such a perspective opens up to investigation the historical processes through which social groups both provide solutions to repetitive tasks by secreting built, enduring structures into the environment (such as the Munsell chart) where they provide frameworks for the organization of action by their predecessors (Hutchins 1995), and articulate those structures to build relevant action through situated talk-in-interaction.

This provides one example of how I have found it useful to use ethnographic analysis of archaeological practice to investigate how human beings build the actions that constitute the social and cognitive worlds they inhabit together. I am particularly interested in developing frameworks for analysis that include both the details of language use and structure in the environment, as well as embodied action. I will briefly note several aspects of this process.

First, unlike many ethnographers I do not depend primarily upon interviews or my own field descriptions and notes (though I do find such resources invaluable as secondary aids to analysis). I am less interested in what people say they do than in what they do, or rather in where their saying is part of the activities being done and not a gloss or description to an outsider. I view language as a form of social action in its own right. My ethnographic methodology therefore consists of extensive videotaping of whatever people happen to be doing in a setting. Videotaping is always selective, partial, and imperfect, but it does provide records that permit detailed analysis of situated, temporally unfolding actions in which the details of language use, embodied action, and structure in the environment mutually inform each other. My point of departure is an analysis of talk-in-interaction. Thus at Arroyo Seco there was a division of labor in which Joan Gero made extensive observations, field notes, and interviews, while I spent just about all of my time videotaping teams doing excavation. In this process audio is crucial and frequently difficult to record clearly. I have thus constantly changed how I tape based on accumulating experience. In subsequent fieldwork, for a range of reasons I eventually came to favor, though not exclusively, a situation in which a wireless microphone was placed on the senior archaeologist as she went from team to team to inspect their work. My use of video has also forced me to develop ways of representing the data that include not

only the talk spoken but also relevant aspects of the participants' bodies and phenomena they are attending to in the environment.

Second, though I consider archaeology a most important site for my research, it is not the only one. Indeed, in order to demonstrate that the practices used to build the specific events that are the focus of a community's attention are in fact quite general, I have frequently compared the work of archaeologists with that in other settings that might initially seem quite different. In "Professional Vision" (Goodwin 1994) I described how a range of practices (highlighting, coding schemes, and the articulation of graphic representations) used by archaeologists to transform the very complex visual field provided by the dirt they were excavating into the discursive objects of their profession were also used by lawyers defending the policemen who beat Rodney King to structure what the jury saw on another complex visual field, the videotape of the beating. In "Action and Embodiment" (Goodwin 2000) I compared archaeologists' embodied work with the Munsell chart with the use of a hopscotch grid to organize action and embodied movement by preadolescent Latina girls. I was attuned to the social importance of coding forms, such as that found in figure 4.1, because of my encounters with similar forms at the airport studied by the Workplace project. The importance of architectures for perception was first impressed upon me on the oceanographic ship, a site in which maps also played a central role in the construction of action and knowledge. Most centrally the organization of embodied action within talk-in-interaction, my original area of research, deeply informs both the methods and the theoretical perspectives of all of my analysis. While archaeology is a central site for my research, I am less interested in what is unique about archaeology than in the way in which the work done by archaeologists sheds light on quite general practices used by human beings to construct social organization, culture, and cognition, and expands our understanding of language structure and use by taking into account a consequential material environment.

Third, topics that I have focused on in my analysis include the social organization of categorization and professional vision. Such phenomena are clearly central to the work of many others (see, for example, Edgeworth 2003). For me they emerge in part from my interest in the organization of collaborative action. In order to build multiparty action together, separate individuals must in some relevant sense construe a world in common. While some of the resources for this are provided by public artifacts, such as the Munsell chart, much of it consists of particular ways of seeing and categorizing the world for which members of a community hold one another accountable. Any competent archaeologist is expected to be able to see features such as post moulds in diffuse color patterns found in the dirt being excavated and to map such features, and so forth. Insofar as such seeing is social, an important part of what it means to be a particular kind of social actor, an archaeologist, its organization is not to be found in the psychology of the individual. To investigate how such vision is organized as public practic, I have found it useful to record the very early days of a field school, where ways of seeing and acting that will later be taken for granted

emerge as not only problematic but also as the topic of instruction and repair in interactions between senior archaeologists and newcomers.

I had planned to include a second example demonstrating how vision and embodied tool use were organized as public social practice through specific interactive arrangements. However, I do not have space to do this. I will therefore briefly sketch the argument without providing a specific example (for a more detailed demonstration of these points see Goodwin 1994; 2003a; 2003b). First, I am especially interested in situations where a senior archaeologist is observing and commenting on the work of a newcomer during actual excavation. Typically in such situations the senior archaeologist can observe both the environment that is the focus of archaeological work (for example, the dirt being excavated) and the operations of the newcomer on that environment. These operations can take many different forms, from drawing lines in outlining features, to map making, and to categorization. In all cases the newcomer must put into practice her ability to both see the world as an archaeologist and use that seeing to build the artifacts, such as a map, which are constitutive of archaeology as a profession. Such professional vision is expected of any competent archaeologist; it is an essential part of what it means to be an archaeologist. The senior archaeologist can approve, challenge, modify, and so forth, the work done by the newcomer and indicate other phenomena that must be taken into account in order to accomplish the tasks in progress. A rich array of different kinds of sign systems and meaning-making resources, including language structure, gesture, embodied participation frameworks, and the ability to create new structure in an environment that can be scrutinized together, are used in conjunction to accomplish action in such settings. For instance, after a young graduate student outlines a feature in the dirt, the senior archaeologist not only says that she would have drawn the line in a different place but also demonstrates this by using her finger to draw another line next to the student's. Through such embodied joint work by a newcomer and someone who is already a competent practitioner, the ways of seeing and doing that constitute being an archaeologist are calibrated as public, social practice. The relevant unit for the analysis of the intersubjectivity that occurs in such encounters, the seeing of a world in common by multiple participants, is not specific to individuals as isolated entities but to archaeology as a profession, a community of competent practitioners, most of whom have never met each other but who nonetheless expect each other to be able to see and categorize the world in the ways that are relevant to the work, tools, and artifacts that constitute their profession.

In summary, linguistic anthropologists and archaeologists focus on very different kinds of phenomena and, indeed, inhabit quite separate cognitive worlds. For one community the uniqueness of human cognitive life, what defines us as a species, is language; for the other community what is distinctive about human beings is the ability to act within and upon the material environment and to reshape it in ways that shape human life and social organization on very long time scales. My sustained encounters with archaeologists led me to see the impor-

tance of trying to develop analytic frameworks for the study of human action and cognition that would encompass both perspectives. Archaeology itself provided one very crucial site for investigating how human action is built through the simultaneous use of language, embodied action, and structure in the material environment.

NOTE

1. I have not so far examined the writing of academic articles, the political organization of the profession, the relationships between archaeologists and the inhabitants of the local communities where they do fieldwork, and so forth. I consider these and the other phenomena that make up the working life of archaeologists most important.

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