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Professional Vision

DISCURSIVE PRACTICES are used by members of a profession to shape events in the domains subject to their professional scrutiny. The shaping process creates the objects of knowledge that become the insignia of a profession's craft: the theories, artifacts, and bodies of expertise that distinguish it from other professions. Analysis of the methods used by members of a community to build and contest the events that structure their lifeworld contributes to the development of a practice-based theory of knowledge and action.[1] In this article, I examine two contexts of professional activity: archaeological field excavation and legal argumentation. In each of these contexts, I investigate three practices: (1) *coding,* which transforms phenomena observed in a specific setting into the objects of knowledge that animate the discourse of a profession; (2) *highlighting,* which makes specific phenomena in a complex perceptual field salient by marking them in some fashion; and (3) *producing and articulating material representations.* By applying such practices to phenomena in the domain of scrutiny, participants build and contest *professional vision,* which consists of socially organized ways of seeing and understanding events that are answerable to the distinctive interests of a particular social group.

In the 1992 trial of four white police officers charged with beating Mr. Rodney King, an African-American motorist who had been stopped for speeding, a videotape of the beating (made without the knowledge of the officers by a man in an apartment across the street) became a politically charged theater for contested vision. Opposing sides in the case used the murky pixels of the same television image to display to the jury incommensurate events: a brutal, savage beating of a man lying helpless on the ground versus careful police response to a dangerous "PCP-crazed giant" who was argued to be in control of the situation. By deploying an array of systematic discursive practices, including talk, ethnography, category systems articulated by expert witnesses, and various ways of highlighting images provided by the videotape, lawyers for both sides were able to structure, in ways that suited their own distinctive agendas, the complex perceptual field visible on the TV screen.

The Rodney King trial provides a vivid example of how the ability to see a meaningful event is not a transparent, psychological process but instead a socially situated activity accomplished through the deployment of a range of historically constituted discursive practices. It would, however, be quite wrong to treat the selective vision that is so salient in the King trial as a special, deviant case, merely a set of lawyers' tricks designed to distort what would otherwise be a clear, neutral vision of objective events unambiguously visible on the tape. All vision is perspectival and lodged within endogenous communities of practice. An archaeologist and a farmer see quite different phenomena in the same patch of dirt (for example, soil that will support particular kinds of crops versus stains, features, and artifacts that provide evidence for earlier human activity at this spot). An event being seen, a relevant *object of knowledge,* emerges through the interplay between a *domain of scrutiny* (a patch of dirt, the images made available by the King videotape, etc.) and a set of *discursive practices* (dividing the domain of scrutiny by highlighting a figure against a ground, applying specific coding schemes for the constitution and interpretation of relevant events, etc.) being deployed within a *specific activity* (arguing a legal case, mapping a site, planting crops, etc.). The object being investigated is thus

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analogous to what Wittgenstein (1958:7) called a *language game,* a "whole, consisting of language and the actions into which it is woven."

My Own Practices for Seeing

It is not possible to work in some abstract world where the constitution of knowledge through a politics of representation has been magically overcome. The analysis in this article makes extensive use of the very same practices it is studying. Graphic representations, including transcripts of talk, diagrams, and frame grabs of scenes recorded on videotape, are annotated and highlighted in order to make salient specific events within them. Such highlighting guides the reader to see within a complex perceptual field just those events that I find relevant to the points I am developing. Applying a category such as *highlighting, graphic representation,* or *coding scheme* to diverse practices in different environments is itself an example of how coding schemes are used to organize disparate events into a common analytical framework. It is thus relevant to note briefly why I made the representational choices that I did.

To analyze how practice is organized as a temporally unfolding process encompassing both human interaction and situated tool use, I require as data records that preserve not only sequences of talk but also body movements of the participants and the phenomena to which they are attending as they use relevant representations. I use videotapes as my primary source of data, recognizing that, like transcription, any camera position constitutes a theory about what is relevant within a scene—one that will have enormous consequences for what can be seen in it later—and what forms of subsequent analysis are possible. A tremendous advantage of recorded data is that they permit repeated, detailed examination of actual sequences of talk and embodied work practices in the settings where practitioners actually perform these activities. Moreover, others can look at—and possibly challenge—my understanding of the events being examined.

As part of continuing fieldwork focusing ethnographically on how scientists actually do their work, activities at one archaeological field school in Argentina and two in the United States were videotaped. All the material analyzed in this article is drawn from one of the American field schools. Tapes of the first Rodney King trial were made from broadcasts of Court TV. I was unable to record the entire trial, so my own recordings were supplemented by an edited summary of the trial purchased from Court TV. The second trial was not broadcast on either radio or television. I was able to get into the courtroom only for the prosecution's closing arguments.

Practices of transcription constitute one local site within anthropology where the politics of representation emerge as a practical problem.[2] For a journal article, the rich record of complicated vocal and visual events moving through time provided by a videotape must be transformed into something that can silently inhabit the printed page.

Both linguistic anthropologists and conversation analysts have devoted considerable complementary and overlapping attention to questions of how talk should be transcribed, including the issue of how speakers themselves parse the stream of speech into relevant units. A major analytic focus of conversation analysis is the description of the procedures used by participants in the midst of talk-in-interaction to construct the events that constitute the lived lifeworld within ongoing processes of action.[3] This has required developing methods of transcription that permit detailed analysis of actors' changing orientations as events unfold though time. Linguistic anthropologists, concerned with maintaining the complex structure of oral performance, have argued that the division of talk into lines within a transcript should make visible to the reader how the speaker organized his or her talk into relevant units.[4] I have tried to do that in this article, breaking lines at intonational units and indenting the continuation of units too long to fit within the page margins. Given the rich interplay of different kinds of units in the stream of speech, the divisions I've made should not be treated as anything more than

a provisional attempt to deal with a very complicated issue. In all other respects, my transcription uses the system developed by Gail Jefferson[5] for the analysis of conversation. The conventions most relevant to the analysis in this article include the use of *bold italics* to indicate talk spoken with special emphasis, a left bracket ([) to mark the onset of overlapping talk, and numbers in parentheses—for example, (1.2)—to note the length of silences in seconds and tenths of seconds. A dash marks the cut-off of the current sound. An equal sign indicates "latching," signifying that there is no interval between the end of one unit and the beginning of a next. Transcribers' comments are italicized in double parentheses; single parentheses around talk indicate a problematic hearing. Punctuation symbols are used to mark intonation changes rather than as grammatical symbols: a period indicates a falling contour; a question mark, a rising contour; and a comma, a falling-rising contour, as might be found in the midst of a list.

Coding Schemes

Central to the organization of human cognition are processes of classification. *Coding schemes* are one systematic practice used to transform the world into the categories and events that are relevant to the work of the profession (Cicourel 1964, 1968). For example, linguists classify sounds in terms of phonetic distinctions; sociologists classify people according to sex and class.

The pervasive power of coding schemes to organize apprehension of the world is demonstrated in particularly vivid fashion in scientific work. Ethnographic analysis of what is usually considered the epitome of abstract, objective, universal, disembodied cognition—Western science—has revealed it to be a patchwork of situated, disparate, locally organized cultures in which knowledge is constituted through a variety of social and political processes.[6] Central to the cognitive processes that constitute science are both material objects (tools and machines of many different types) and writing practices quite unlike those typically studied by anthropologists investigating literacy. In order to generate a data set, collections of observations that can be compared with each other, scientists use coding schemes to circumscribe and delineate the world they examine. When disparate events are viewed through a single coding scheme, equivalent observations become possible.

Let us briefly investigate this process using the example of a field school for young archaeologists. The medium in which archaeologists work is dirt. Students are given a form that contains an elaborate set of categories for describing the color, consistency, and texture of whatever dirt they encounter. They are even expected to taste a sample of the dirt to determine how sandy it is. Moreover, some of the categories are supported by additional tools of inscription, such as a Munsell color chart, used by archaeologists all over the world as a standard for color descriptions.

The process of filling in the form requires physical, cognitive, and perceptual work. Thus, in order to determine the color of a specimen of dirt, the students must obtain a sample with a trowel, highlight it by squirting it with water, and then hold the sample under the holes in the Munsell color chart (see Figure 1). The Munsell book encapsulates in a material object the theory and solutions developed by earlier workers faced with this task of classification (Hutchins 1993). The pages juxtapose color patches and viewing holes that allow the dirt to be seen right next to the color sample, providing a historically constituted architecture for perception.

Though apparently distant from the abstract world of archaeological theory and from the debates that are currently animating the discipline, this encounter between a coding scheme and the world is a key locus for scientific practice, the place where the multifaceted complexity of "nature" is transformed into the phenomenal categories that make up the work environment of a scientific discipline. It is precisely here that nature is transformed into culture.

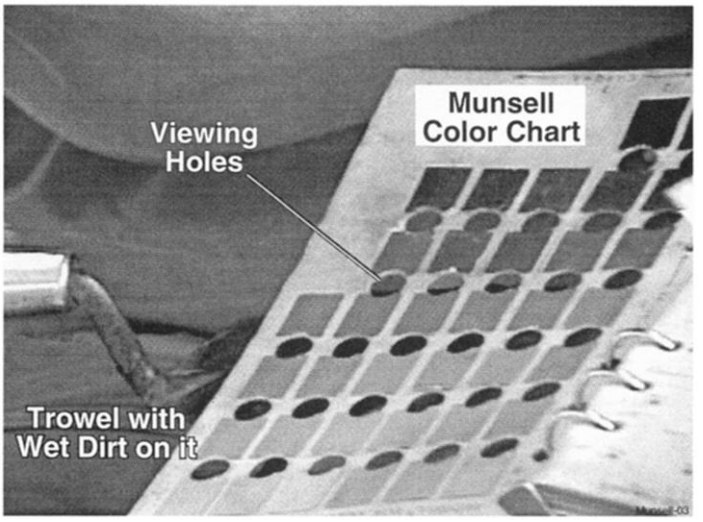


Figure 1
Munsell color chart.

Despite the rigorous way in which a tool such as this one structures perception of the dirt being scrutinized, finding the correct category is not an automatic or even an easy task (Goodwin 1993). The very way in which the Munsell chart provides a context-free reference standard creates problems of its own. The color patches on the chart are glossy, while the dirt never is, so that the chart color and the sample color never look exactly the same. Moreover, the colors being evaluated frequently fall between the discrete categories provided by the Munsell chart. Two students at the field school looking at exactly the same dirt and reference colors can and do disagree as to how it should be classified. However, the definitiveness provided by a coding scheme typically erases from subsequent documentation the cognitive and perceptual uncertainties that these students are grappling with, as well as the work practices within which they are embedded.

The use of such coding schemes to organize the perception of nature, events, or people within the discourse of a profession carries with it an array of perceptual and cognitive operations that have far-reaching impact. First, by using such a system, a worker views the world from the perspective it establishes. Of all the possible ways that the earth could be looked at, the perceptual work of students using this form is focused on determining the exact color of a minute sample of dirt. They engage in active cognitive work, but the parameters of that work have been established by the system that is organizing their perception. Insofar as the coding scheme establishes an orientation toward the world, it constitutes a structure of intentionality whose proper locus is not an isolated, Cartesian mind but a much larger organizational system, one that is characteristically mediated through mundane bureaucratic documents such as forms. Forms, with their coding schemes, allow a senior investigator to inscribe his or her perceptual distinctions into the work practices of the technicians who code the data. Such systems provide an example of how distributed cognition is organized through the writing practices that coordinate action within an organization (Smith 1990:121–122).

Highlighting

Human cognitive activity characteristically occurs in environments that provide a complicated perceptual field. A quite general class of cognitive practices consists of

methods used to divide a domain of scrutiny into a figure and a ground, so that events relevant to the activity of the moment stand out. For example, forms and other documents packed with different kinds of information are a major textual component of many work environments. Faced with such a dense perceptual field, workers in many settings *highlight* their documents with colored markers, handwritten annotations, and stick-on notes. In so doing they tailor the document so that those parts of it which contain information relevant to their own work are made salient. Psychologists have long talked about figure/ground relations as a basic element of human perception. Situating such processes not only within the mind but as visible operations on external phenomena has a range of significant consequences. As we will see in subsequent examples, through these practices structures of relevance in the material environment can be made prominent, thus becoming ways of shaping not only one's own perception but also that of others.

Highlighting will be examined first in the work practices of archaeologists. In looking at the earth, archaeologists attend to an array of color distinctions in order to discern the traces of past human structures. For example, even though a post that supported a roof of an ancient house has long since decayed, the earth where it stood will have subtle color differences from the dirt around it. Archaeologists attempt to locate *features* such as these post molds[7] by scrutinizing the earth as they dig. Categories of relevance to the profession, such as post molds, are thus used to structure interpretation of the landscape. When a possible feature is found, the archaeological category and the traces in the dirt that possibly instantiate it are each used to elaborate the other in what has been called the *documentary method of interpretation.* [8] Thus the category "post mold" provides a texture of intelligibility that unifies disparate patches of color into a coherent object. These patches of color in turn provide evidence for the existence in this patch of dirt of an instance of the object proposed by the category.

Features can be difficult to see. In order to make them visible to others, the archaeologist outlines them by drawing a line in the dirt with a trowel (see Figure 2). By doing this the archaeologist establishes a figure in what is quite literally a very amorphous ground. This line in the sand has very powerful persuasive consequences. As a visible annotation of the earth, it becomes a public event that can guide the

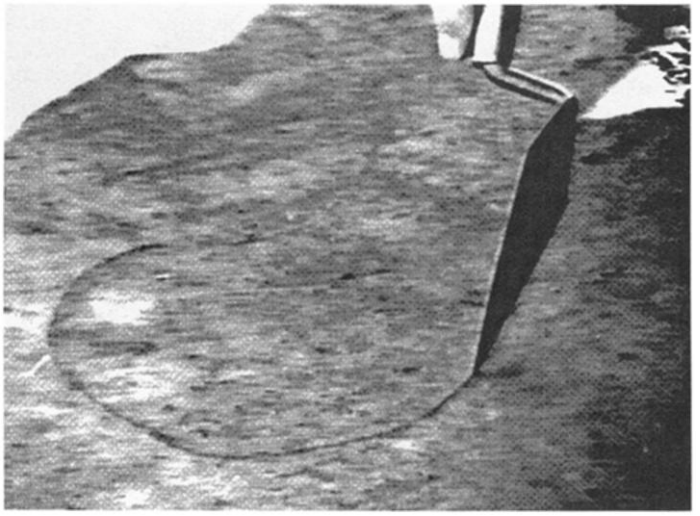


Figure 2
Post mold.

perception of others while further reifying the object that the archaeologist proposes to be visible in the color patterning in the dirt. The perceptual field provided by the dirt is enhanced in a work-relevant way by human action on it. Through such highlighting and the subsequent digging that it will help to organize, the archaeologist discursively shapes from the materials provided by the earth the phenomenal objects—that is, the archaeological features—that are the concerns of his or her profession.

Graphic Representations as Embodied Practice

Most linguists analyzing literacy have focused on the writing of words, sentences, and other written versions of spoken language. However, graphic representations of many different types constitute central objects in the discourse of various professions. Scientific talks and papers are best seen not as a purely linguistic text but as a reflexive commentary on the diagrams, graphs, and photographs that constitute the heart of a presentation.[9] More generally, since the pioneering work of Latour and Woolgar (1979), the central importance of *inscriptions* in the organization of scientific knowledge has become a major focus of research. A theory of discourse that ignored graphic representations would be missing both a key element of the discourse that professionals engage in and a central locus for the analysis of professional practice. Instead of mirroring spoken language, these external representations complement it, using the distinctive characteristics of the material world to organize phenomena in ways that spoken language cannot—for example, by collecting records of a range of disparate events onto a single visible surface.

To explore such issues and prepare the ground for investigation of how lawyers articulated graphic representations in the Rodney King trial, the practices that archaeologists use to make maps will now be investigated. This will allow us to examine the interface between writing practices, talk, human interaction, and tool use as these professionals build representations central to the work of their discipline. A team of archaeologists is at work producing a map (see Figure 3). This particular map is of a *profile,* the layers of dirt visible on the side of one of the square holes that are dug to

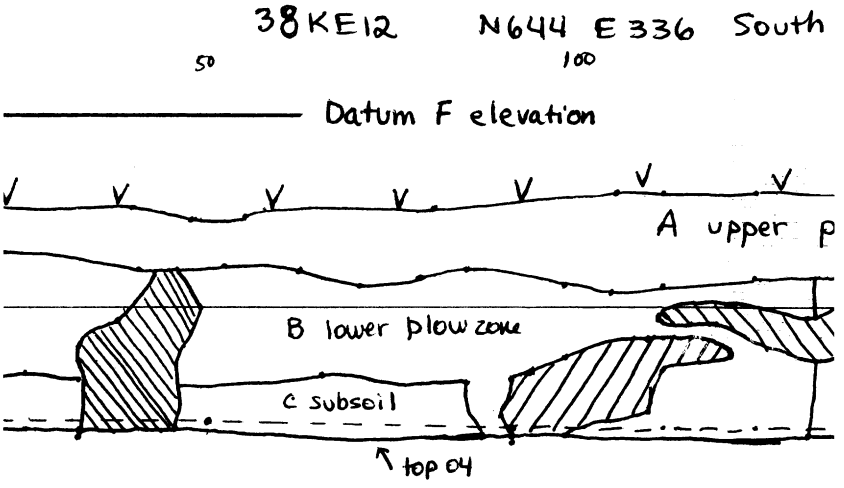


Figure 3
Map scan.

excavate a site. Maps of this sort are one of the distinctive forms of professional literacy that constitute archaeology as a profession.

To demarcate what the archaeologist believes are two different layers of dirt, a line is drawn between them with a trowel. The line and the ground surface above it are then transferred to a piece of graph paper. This is a task that involves two people. One measures the length and depth coordinates of the points to be mapped, using a ruler and a tape measure. He or she reports the measurements as pairs of numbers, such as "At forty, plus eleven point five" (see Figure 4). A second archaeologist transfers the numbers provided by the measurer to a piece of graph paper. After plotting a set of points, he or she makes the map by drawing lines between them. What we find here is a small activity system that encompasses talk, writing, tools, and distributed cognition as two parties collaborate to inscribe events they see in the earth onto paper.

The activity of inscription that we will now examine begins with a request from Ann, the writer, to Sue, the measurer (lines 1–2):

1	Ann:	Give me the ground surface over here
2		to about ***nine***ty.
3		(1.7)
4	Ann:	No- No- Not ***at*** ninety.=
5		From you ***to*** about ninety.

However, before Sue has produced any numbers, indeed before she has said anything whatsoever, Ann, who is her professor, challenges her, telling her that what she is doing is wrong (lines 4–5). How can Ann see that there is something wrong with a response

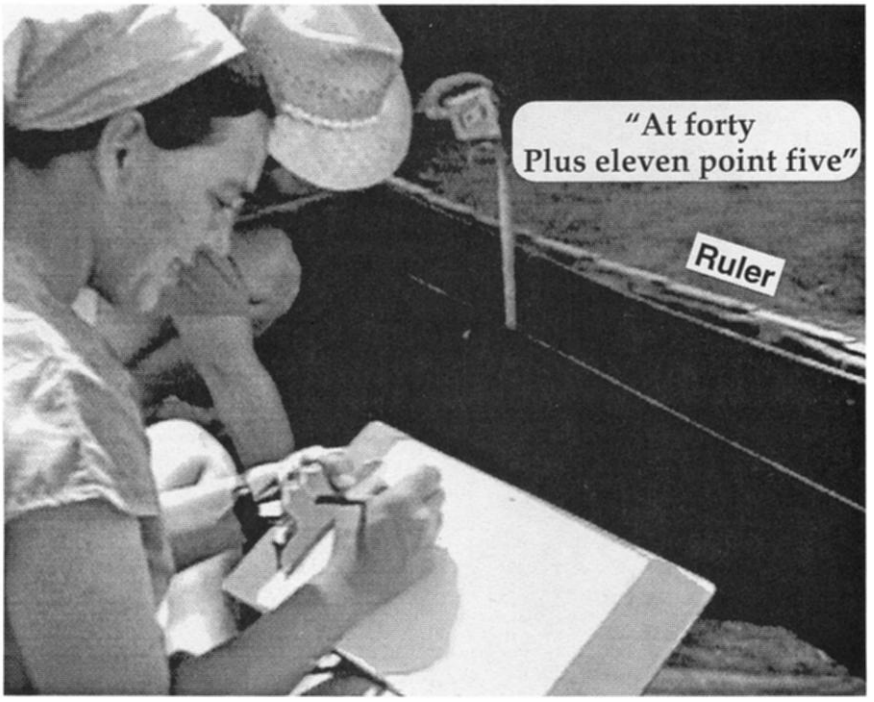


Figure 4
Measuring and writing for an archaeological chart.

that has not even occurred yet? Crucial to this process is the phenomenon of *conditional relevance* (Schegloff 1968). A first utterance creates an interpretive environment that will be used by participants to analyze whatever occurs after it. Here no subsequent talk has yet been produced. However, providing an answer in this activity system encompasses more than talk: before speaking the set of numbers, Sue must first locate a relevant point in the dirt and measure its coordinates. Both her movement through space and her use of tools such as the tape measure are visible events.[10]

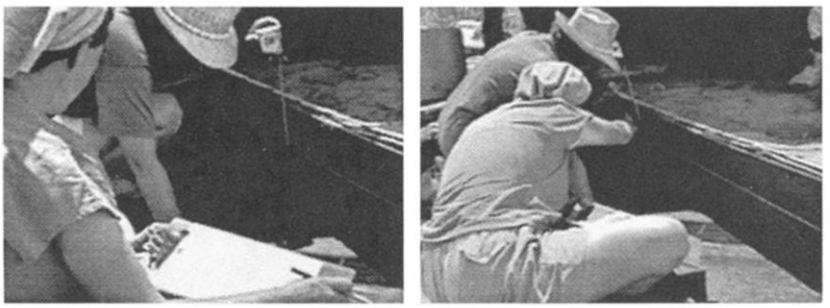
As Ann finishes her directive, Sue is holding the tape measure against the dirt at the left or zero end of the profile. However, just after hearing "ninety," Sue moves both her body and the tape measure to the right, stopping near the 90 mark on the upper ruler. By virtue of the field of interpretation opened up through conditional relevance, Sue's movement and tool use as elements of the activity she has been asked to perform can now be analyzed by Ann and found wanting. Immediately after this Ann produces her correction (lines 4–5).

Additional elements of cognitive operations that Ann expects Sue to perform in order to make her measurements are revealed as the sequence continues to unfold. Making the relevant measurements presupposes the ability to locate where in the dirt measurements should be made. Sue's response to the correction calls this presupposition into question and leads to Ann telling her explicitly, in several different ways, what she should look for in order to determine where to measure. The process begins after Ann tells Sue to measure points between 0 and 90 (line 5). Sue does not immediately move to this region but instead hesitates for a full second (line 6) before replying with a weak "Oh."

1	Ann:		Give me the ground surface over here
2			to about ***nine***ty.
3			(1.7)
4	Ann:		No- No- Not ***at*** ninety.=
5			From you ***to*** about ninety.
6	Sue:		(1.0) Oh.
7	Ann:	→	Wherever there's a change in slope.
8	Sue:		(0.6) Mm kay.

In line 7 Ann moves from request to instruction by telling Sue what she should be looking for in the landscape: "Wherever there's a change in slope." Though most approaches to the study of meaning in language focus on the issue of how concepts can best be defined (for example, componential analysis and other approaches to semantics), Wittgenstein (1958:242) notes that "If language is to be a means of communication there must be agreement not only in definitions but also (queer as this may sound) in judgments." In the present case, in order to use what Ann has just said to pursue the task they are collaboratively engaged in, Sue must be able to find in the dirt what will count as "a change in slope." As the party who has set her this task, Ann is in a position to evaluate her success. Sue again moves her tape measure far to the right (see Figure 5, image *A*). At this point, instead of relying on talk alone to make explicit the phenomena that she wants Sue to locate, Ann moves into the space that Sue is attending to (image *B*) and points to one place that should be measured while describing in more vernacular language what constitutes "a change in slope": "where it *stops* being flat" (line 11). She then points to additional places for measurement (lines 13–17).

Labeling what Ann does here either deictic gesture or ostensive definition does not do adequate justice to its complexity. Analysis of the gesture cannot focus on the gesture alone or on some possible mental state of the speaker it is externalizing (effectively drawing an analytic bubble at the skin of the actor); it requires simultaneous attention to the environment that the hand is highlighting, the talk that sets the coding problem for the addressee, and the activity that these participants are working to accomplish. Talk and gesture mutually elaborate on each other within a framework of action that includes at least three components: (1) a semantic description, such as "a change in



9 (2.0)
10 Ann: See so if it's *fairly flat*
11 I'll need one where it *stops* being fairly ┌flat.=
12 Sue: └Okay.
13 Ann: =Like right there.
14 Then I'll need one there.
15 Then I'll need one the:re.
16 Sue: (0.3)┌°All right.
17 Ann: └And then one at the-

Figure 5
Talk and gesture mutually elaborate on each other.

slope"; (2) a complex perceptual field where an instantiation of that category is to be located; and (3) the hand of an actor moving within that perceptual field. The activity in progress, including the sequence of talk within which these ostensive demonstrations emerge, provides a relevant language game that can be used to make inferences about precisely which features of the complex perceptual field being pointed at should be attended to. What Sue is being taught is not something that falls within the scope of language as an isolated system—not a definition (she already knows what a "change in slope" is in the abstract)—but a mode of practice, how to code a relevant perceptual field in terms of categories that are consequential for her work. In turn this process is embedded within the larger activity of doing archaeological fieldwork, as well as a local interactive field that structures participants' mutual access to both each other and the domain of scrutiny where relevant work is being done. Within such an interactive field, the actions that Sue is expected to perform enable Ann to evaluate her comprehension and, where relevant, to take remedial action in subsequent moves. The cognitive activities occurring here are situated, distributed, and interactively organized. In this process coding tasks (Sue is set the problem of finding an example of a particular category in the materials she is looking at) and highlighting (the movement of Ann's hand that displays where a solution to Ann's problem is to be found) function together in the production of a relevant graphic representation (the map).

One of the things that is occurring within this sequence is a progressive expansion of Sue's understanding as the distinctions she must make to carry out the task assigned to her are explicated and elaborated. In this process of socialization through language,[11] growth in intersubjectivity occurs as domains of ignorance that prevent the successful accomplishment of collaborative action are revealed and transformed into practical knowledge—a way of seeing that is sufficient to complete the job at hand—in a way that allows Sue to understand what Ann is asking her to do and make an appropriate, competent response to her request.

It would, however, be quite wrong to see the unit within which this intersubjectivity is lodged as being simply two minds coming together to do the work at hand. Instead, the distinctions being explicated, the ability to see in the very complex perceptual field provided by the landscape to which they are attending those few events that count as points to be transferred to the map, are central to what it means to see the world as an archaeologist and to use that seeing to build the artifacts, such as this map, that are constitutive of archaeology as a profession. All competent archaeologists are expected to be able to do this; it is an essential part of what it means to *be* an archaeologist,[12] and it is to these professional perceptual standards that Sue is being held accountable. The relevant unit for the analysis of the intersubjectivity at issue here is thus not these individuals as isolated entities but archaeology as a profession, a community of competent practitioners, most of whom have never met each other but nonetheless expect each other to be able to see and categorize the world in ways that are relevant to the work, tools, and artifacts that constitute their profession.

This sequence brings together an important range of cognitive phenomena relevant to the organization of human action, including interaction with both other human beings and the world itself, talk as a form of social action, writing practices, and the construction of cognitive artifacts that provide relevant representations of the world. These inscription practices are accomplished through the appropriate use of artifacts such as graph paper, rulers, and tape measures. Supporting such tool use are sets of perceptual structures, the ability to see what and where to measure. Moreover, we are able to glimpse how these structures are passed on from one generation to the next through apprenticeship.

Contested Vision

The use of coding schemes, highlighting practices, and the articulation of graphic representations to organize perception will now be examined in another professional setting: the courtroom. On March 3, 1991, an amateur video photographer taped a group of Los Angeles police officers administering a very violent beating with metal clubs to an African-American motorist, Mr. Rodney King, who had been stopped for a traffic violation. When the tape was broadcast on television, there was public outrage, and four police officers involved in the beating were put on trial for excessive use of force. The principal piece of evidence against them was the tape of the beating. The violence it showed was so graphic that many people assumed that a conviction was almost automatic. However, the jury found the police officers innocent, a verdict that triggered the Los Angeles uprising. At a second federal trial a year later, two of the four officers were convicted of violating King's civil rights and two were acquitted.

Perhaps surprisingly, the main evidence used in the defense of the police officers was the tape showing them beating King. Indeed, one of the officers convicted in the second trial, Sergeant Stacy Koon, spent much of his time between the two trials watching and rewatching the tape, seeing how it looked when projected on different walls in his house. Rather than wanting to minimize the events on the tape, he told a reporter that

> if we had our way, we'd go down to Dodger Stadium and rip off that big-screen Mitsubishi and bring it into the courtroom and say, 'Hey, folks, you're in for the show of your life because when this tape gets blown up it's awesome.' [Mydans 1993d:A10]

For Rodney King the experience of looking at the tape was quite different: "It's sickening to see it. It makes me sick to my stomach to watch it" (Newton 1993a:A16).

At the first trial the prosecution presented the tape of the beating as a self-explicating, objective record. Thus the chief prosecutor said,

> What more could you ask for? You have the videotape that shows objectively, without bias, impartially, what happened that night. The videotape shows conclusively what happened that night. It can't be rebutted. [Mydans 1993b:A7]

But the lawyers defending the police officers did not treat the tape as a record that spoke for itself. Instead they argued that it could be understood only by embedding the events visible on it within the work life of a profession. The defense proposed that the beating constituted an example of careful police work, a form of professional discourse with the victim in which he was a very active coparticipant—indeed, the party who controlled the interaction.

To successfully make this claim, the defense provided the jury with ethnography about police practices and with a coding scheme to be used to analyze the events on the tape. The power of coding schemes to control perception in this fashion was central to the defense strategy. The defense contended that if the police officers could legitimately see King's actions as aggressive and a threat to them, then the police were entitled to use force to protect themselves and take him into custody. The central point debated within the trial was what the police officers who beat King perceived him to be doing. These perceptions were treated not as idiosyncratic phenomena lodged within the minds of individual police officers but as socially organized perceptual frameworks shared within the police profession.

These assumptions about the conventions maintained by the police had two consequences for the organization of discourse within the courtroom: (1) police perceptions, as a domain of professional competence, can be described and analyzed through use of highlighting, coding schemes, and graphic representations; (2) in that these perceptions are not idiosyncratic phenomena restricted to individuals but frameworks shared by a profession, *expert testimony* is possible. An expert who was not present at the scene can describe authoritatively what police officers could legitimately see as they looked at the man they were beating.

Expert testimony is given a very distinctive shape within the adversarial system of the American courtroom.[13] Each side hires its own experts and attacks the credibility of its opponents' experts. Moreover, the use of expert witnesses intersects with rules establishing what counts as adequate proof. Reasonable doubt can be created by muddying the water with a plausible alternative. In the words of the lawyer for Officer Theodore Briseno, one of the defendants:

> Your experts really don't have to be better than their [the prosecution's] experts. All you've got to have are experts on both sides. I think [jurors] wonder: 'How could we as lay people know beyond a reasonable doubt, when the experts can't decide?' [Lieberman 1993b:A32].

Such a strategy can be quite successful. One of the jurors who acquitted the police officers in the first King trial said, "Our instructions of how we could consider evidence stated . . . if there are two reasonable explanations for an event, we had to pick the one that points to innocence, not the one that points to guilt" (Lieberman 1993b:A32).

Coding Aggression as Professional Practice

Allowing expert testimony on the use of force by the police had the effect of filtering the events visible on the tape through a police coding scheme, as articulated by an expert who instructed the jury how to see the body movements of the victim in terms of that system. What one finds in the trial is a dialogic framework encompassing the work of two different professions, as the discourse of the police with one of their suspects is embedded within the discourse of the courtroom.

In order to measure police perception, a coding scheme for the escalation of force was applied to the tape: (1) if a suspect is aggressive, the proper police response is escalation of force in order to subdue him; (2) when the suspect cooperates, then force is de-escalated. When an expert applies this coding scheme to the tape, a new set of finely differentiated events is produced, described through appropriate language drawn from the social sciences. In the words of one expert:

Expert: There were,
ten distinct (1.0) uses of force.
rather than one single use of force.
...
In each of those, uses of force
there was an escalation and a de escalation, (0.8)
an assessment period, (1.5)
and then an escalation and a de-escalation again. (0.7)
And another assessment period.

The massive beating is now transformed into ten separate events, each with its own sequence of stages.

The use of this category system radically transforms the images visible on the tape by placing them within an expert frame of reference. Thus when King is hit yet another blow, this is transformed from a moment of visible violence—what the prosecution in the second trial will instruct the jury to see as "beating a suspect into submission"—into a demonstration that the "period of de-escalation has ceased":

Defense: Four oh five, oh one.
We see a blow being delivered. =
=Is that correct.
Expert: That's correct.
The- force has been again escalated (0.3)
to the level it had been previously, (0.4)
and the de-escalation has ceased.
...
Defense: And at-
At this point which is,
for the record four thirteen twenty nine, (0.4)
We see a blow being struck
and thus the end of the period of, de-escalation?
Is that correct Captain.
Expert: That's correct.
Force has now been elevated to the previous level, (0.6)
after this period of de-escalation.

A reader looking at this sequence might argue that what the expert is saying is a mere tautology: if someone is being hit again, then—almost by definition—any period of de-escalation of force (the moments when the suspect is not being hit) has ceased. However, much more than tautology is involved. By deploying the escalation/de-escalation framework, the expert has provided a coding scheme that transforms the actions being coded into displays of careful, systematic police work. One of the defense lawyers said that what he wanted to show the jury was that "what looks like uncontrolled uh brutality and random violence is indeed a very disciplined and controlled effort to take King into custody" (interview with Court TV, CRT 018:03:30). A major resource for affecting such a perceptual transformation is the use of coding schemes such as the one articulated above by the defense's expert witness. Such schemes provide the jury with far from neutral templates for viewing and understanding in a particular way the events visible on the tape.

These structures also define the instruments of violence visible on the tape. Earlier it was noted how the conditional relevance of an utterance creates a context that shapes interpretation of the events it points to. When the escalation framework was first introduced, the defense attorney showed the jury a chart of *tools* used by the police that

included not only the batons with which they were beating him but also the kicks that they administered:

Defense: And this chart will show you the ***tools***
that Sergeant Koon had available to him on March third.
...
The next tool up, (1.9)
Is: (0.3) a side handle baton. (0.8)
a metal (0.3) baton. (1.0)
is: a tool (0.8)
to protect yourself (0.9)
and to take people into custody. (1.0)
And in addition to that (0.3)
on the same level with this (0.5)
the experts will tell you as well as Sergeant Koon, (0.4)
that there are ***kicks***,

A coding scheme, classifying phenomena visible on the tape as tools required for the work of a particular occupation, is deployed to move what the prosecution described as brutal "cowardly stomps" inflicted on a prone, beaten man into a domain of professional police work.

The escalation/de-escalation framework was taught in the police academy as a guide for appropriate action when applying force. It generated a second coding scheme focused on the suspect's body. Central to the case made by the defense was the proposal that the police officers themselves were required to evaluate King's actions as either *aggressive* or *cooperative* in order to decide whether to escalate or de-escalate force—that is, whether they should hit him again. The key perceptual decision posed in the analysis of the tape thus becomes whether the police officers can legitimately see the suspect as aggressive, in which case, it is argued, they are justified in applying further force. The following is from the cross-examination of defendant Laurence Powell, the officer who landed the most blows on King:

Prosecutor: You can't look at that video and say
that every one of those blows
is reasonable can you.
(1.0)
Powell: Oh I *can* if I put my perceptions in.

Crucially, the defense argues that an interpretive framework focused on the suspect's actions vests control of the situation in the victim, since his actions control the response of the police:

Defense: Rodney **King**
and Rodney King alone
was in control of the situation.

The net effect of buying into this category system as a framework for the interpretation of the tape is a most consequential structuring of the dense and complicated perceptual field provided by the tape, with the suspect/victim King becoming the figure, the focus of minute scrutiny, while the officers performing the beating recede into the background.

Expert Testimony: An Ethnography of Seeing

To analyze the tape in these terms, the defense calls Sergeant Charles Duke from the Los Angeles Police Department as an expert on the use of force by the police (see Figure

6). Commentators on the first trial considered Duke to be the most important and persuasive witness in the case.

At the point where we enter the following sequence, the prosecutor has noted that King appears to be moving into a position appropriate for handcuffing him and that one officer is in fact reaching for his handcuffs—the suspect is being cooperative.

1	Prosecutor:	So uh would you,
2		again consider this to be:
3		a nonagressive, movement by Mr. King?
4	Sgt. Duke:	At this time no I wouldn't. (1.1)
5	Prosecutor:	It is aggressive.
6	Sgt. Duke:	Yes. It's starting to be. (0.9)
7		This foot, is laying flat, (0.8)
8		There's starting to be a ***bend.*** in uh (0.6)
9		this leg (0.4)
10		in his butt (0.4)
11		The buttocks area has started to rise. (0.7)
12		which would put us,
13		at the beginning of our ***spec***trum again.

Here the process of coding events within a relevant perceptual field becomes an open contest as prosecution and defense use a range of discursive practices to debate whether body movements of King visible on the videotape should be coded as cooperative or aggressive. By noting both the submissive elements in King's posture and the fact that one of the officers is reaching for his handcuffs, the prosecutor has tried to make the case that the tape demonstrates that at this point the officers perceive King as cooperative. If he can establish this point, hitting King again would be unjustified and the officers

Figure 6

Sergeant Duke analyzes the Rodney King video tape. Historical still of the Rodney King Beating courtesy of George Holliday © 1991 George Holliday. All rights reserved. NO REPRODUCTION OF THIS STILL MAY BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF GEORGE HOLLIDAY.

should be found guilty of the crimes they are charged with. The contested vision being debated here has very high stakes.

To rebut the vision proposed by the prosecutor, Duke uses the semantic resources provided by language to code as aggressive extremely subtle body movements of a man lying facedown beneath the officers (lines 7–11). Note, for example, not only his explicit placement of King at the very edge, the beginning, of the aggressive spectrum (line 13) but also how very small movements are made much larger by situating them within a prospective horizon through repeated use of "starting to" (lines 6, 18, 11), for example, "The buttocks area has started to rise." The events visible on the tape are enhanced and amplified by the language used to describe them.

This focusing of attention organizes the perceptual field provided by the videotape into a salient figure, the aggressive suspect, who is highlighted against an amorphous background containing nonfocal participants, the officers doing the beating. This structuring of the materials provided by the image is accomplished not only through talk but also through gesture. As Duke speaks, he brings his hand to the screen and points to the parts of King's body that, he is arguing, display aggression (see Figure 7). In looking at how the senior archaeologist pointed to where examples of the categories her student was searching for could be found, it was noted how a category, a gesture, and the perceptual field that it was articulating mutually elaborated on each other. Here the touchable events on the television screen provide visible *evidence* for the description constructed through talk. What emerges from Duke's testimony is not just a *statement,* a static category, but a *demonstration* built through the active interplay between the coding scheme and the domain of scrutiny to which it is being applied. As talk and image mutually enhance each other, a demonstration that is greater than the sum of its parts

Figure 7
Sergeant Duke shows display of aggression by Rodney King. Historical still of the Rodney King Beating courtesy of George Holliday © 1991 George Holliday. All rights reserved. NO REPRODUCTION OF THIS STILL MAY BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF GEORGE HOLLIDAY.

emerges. Simultaneously, King, rather than the officers, becomes the focus of attention as the expert's finger, articulating the image, delineates what is relevant within it.

By virtue of the category systems erected by the defense, the minute rise in King's buttocks noted on the tape unleashes a cascade of perceptual inferences that have the effect of exonerating the officers. A rise in King's body is interpreted as aggression, which in turn justifies an escalation of force. Like other parties faced with a coding task, the jury members were led to engage in intense, minute cognitive scrutiny as they looked at the tape of the beating to decide the issues at stake in the case. However, once the defense's coding scheme is accepted as a relevant framework for looking at the tape, the operative perspective for viewing it is no longer a layperson's reaction to a man lying on the ground being beaten but instead a microanalysis of the movements being made by that man's body to see if it is exhibiting aggression.

The expert witnesses for the defense simultaneously construct actions as both rational and without moral responsibility, in the case of the police, and as mindlessly mechanical and morally responsible, in the case of Rodney King.[14] Thus references to phenomena such as "an assessment period" imply rational deliberation on the part of the police without individual moral responsibility in terms other than the correctness of assessment—for example, the agentless passive voice of "We see a blow being delivered," "The force has again been escalated," and "kicks" as tools of the trade. On the other hand, King is characterized both as an almost mindless, moving force—for example, "The buttocks area has started to rise"—and as being "in control of the situation." This is accomplished in part by the disassembly of King's body from a responsible agent into a bunch of moving parts that become the triggering mechanism for a typified process to which, it is argued, the police are required to respond in a disciplined, dispassionate way. Discourses of rationality, of mechanism, and of moral responsibility are simultaneously, but strategically and selectively, deployed.

In the first trial, though the prosecution disputed the analysis of specific body movements as displays of aggression, the relevance of looking at the tape in terms of such a category system was not challenged. Observers considered this to be a very serious mistake (Lieberman 1993a:A26). A key difference in the second trial, which led to the conviction of two of the officers, was that there the prosecution gave the jury alternative frameworks for interpreting the events on the tape. These included both an alternative motive for the beating, namely that the police officers were teaching a lesson to a man who had been disrespectful to them (Mydans 1993c), and an alternative interpretation of the movements of King's body that Sergeant Duke highlighted, namely as normal reactions of a man to a beating rather than as displays of incipient aggression. In the prosecution's argument, King "cocks his leg" not in preparation for a charge but because his muscles naturally jerk after being hit with a metal club. The prosecution's alternative interpretive template also instructed the jury to look at the physical behavior of the police officers who were not hitting King, portraying them as nonchalantly watching a beating rather than poised to subdue a still dangerous suspect. Instead of restricting focus to the body of King, the prosecution drew the jury's attention to the slender stature of Officer Briseno, the officer sent in alone at the end of the beating to handcuff the man that the defense was portraying as a dangerous giant. The prosecutor in the second trial also emphasized to the jury inherent contradictions in the arguments being made by the defense. The defense had portrayed King as both a cunning martial arts expert, scanning the scene to plot his next move, and as a man crazed by drugs. Instead, the prosecution argued, he was simply a beaten man who fell helplessly to the ground.[15] Though most of the evidence used in the two trials was the same (most crucially the tape), the prosecutors in the second trial were able to build discursively their own interpretive frameworks to counter those that had been so effectively deployed by the defense, and thus provide their jury with ways of looking at the tape that had not been available to the first jury.

The perspectival framework provided by a professional coding scheme constitutes the objects in the domain of scrutiny that are the focus of attention. By using the coding scheme to animate the events being studied, the expert teaches the jury how to look at the tape and how to see relevant events within it (Shuy 1982:125). He provides them with an ethnography of seeing that situates the events visible on the tape within the worklife and phenomenal world of a particular work community. Here this ethnographer is not an outside anthropologist but an actual member of the community whose work is being explicated. Expert testimony in court forces members of a discourse community to become metapragmatically aware of the communication practices that organize their work, including, in this case, violence as a systematic mode of discourse capable of being described scientifically as professional practice in minute detail.

Insofar as the courtroom provides a dialogic framework encompassing the discourse of two different professions, scrutiny is occurring on a number of distinct levels: first, police scrutiny of the suspect's body as a guide for whether to beat him; second, scrutiny by those in court, including the jury and expert witnesses, as they assess the scrutiny of the police;[16] and third, within the framework of this article, our scrutiny of how those in the courtroom scrutinize the police scrutinizing their victim.

Graphic Demonstrations and Material Artifacts: The Birth of Rodney King as a Visible Actor

The perceptual field provided by the tape was manipulated and enhanced in other ways as well. At the very beginning of the tape, while the camera was still slightly out of focus, King ran toward the officers. On the tape itself, this event is hard to see: it happens very quickly and is difficult to discern in the midst of a dark but very complex perceptual field filled with other events, including numerous police officers, a police car, and King's own car, which, because of its light color and lack of movement, is the most salient object in the frame—indeed, the only item that can be easily recognized. The images visible on the tape are made even more difficult to see by the movement of the zooming camera and its lack of focus.

One of the defense attorneys in the first trial had photographs made from individual tape frames. The photos were cropped, enlarged, and pasted in sequence to form a display over a meter long that was placed in front of the jury on an easel. The salience of King in these images was amplified through use of *highlighting*. As the defense attorney unveiled his display, he placed clear overlays with large white lines outlining King's body on top of the photos (see Figure 8). Earlier we saw an archaeologist weave a post mold into existence by drawing a line through subtle patches of color differences in a bit of dirt. Here the defense attorney uses similar procedures for enhancing objects in the domain of scrutiny to call forth from the murky pixels on the video screen the discursive object that is the point of his argument, a large, violent, charging African-American man who was so dangerous that hitting him 47 times with metal clubs was reasonable and justified. By virtue of the figure/ground relationship established through such highlighting, the police officers, all situated beyond the boundaries of the lines drawn by the lawyer, recede into the background.

When videotape is used as the medium for displaying King's movements, a sense of what is happening as events unfold rapidly through time can be obtained only by replaying the tape repeatedly while trying to select from the confusing images on the screen that subset of visible events on which one is trying to concentrate. The work of the viewer is radically changed when these scenes are transformed into the photographic array. Movement through time becomes movement through space, that is, the left-to-right progression of the cropped frames. Each image remains available to the viewer instead of disappearing when its successor arrives, so that both the sequence as a whole and each event within it can be contemplated and rescanned at leisure. Much of the visual clutter[17] in the original images is eliminated by cropping the photos.

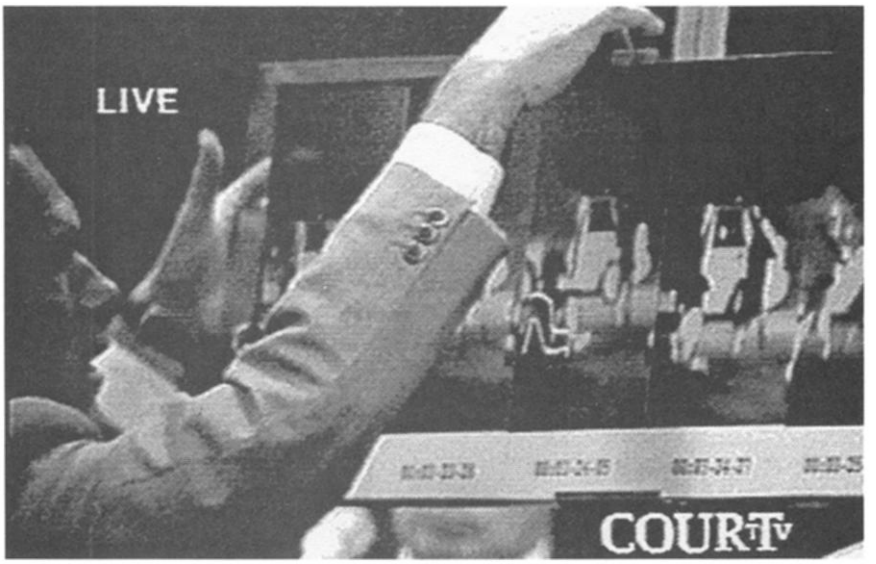


Figure 8
Use of white lines to highlight King's body. Historical still of the Rodney King Beating courtesy of George Holliday © 1991 George Holliday. All rights reserved. NO REPRODUCTION OF THIS STILL MAY BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF GEORGE HOLLIDAY.

In his analysis of similar representational practices in scientific discourse, Lynch (1988) wrote about them providing an *externalized retina.* The defense lawyer makes precisely the same argument, stating that by enhancing the image in this way, he is able to structure the world being scrutinized so that it reveals what his client perceived (lines 5–8):

1	Defense:	***R***odney ***K***ing, (0.4) in the very beginning, (1.0)
2		in the first six frames, (2.2)
3		of this incident, (2.4)
4		***Went*** (4.7) from the grou:nd, (0.4) to a charge. (1.2)
5		And what Sergeant Koon will tell you=
6		=***this*** is his rendi:tion, (0.4) of ***wh***at he sa:w. (0.7)
7		*((Laying White Line Overlays on Top of Photos))*
8		***This*** is how he perceived it. (3.6)
9		But once he saw Rodney King,
10		***ri:se*** to his feet, (1.2) and attack at Powell, (1.4)
11		That in ***Koon***'s mind, (0.9) in charge of his officers (1.2)
12		that Rodney King has set the tone. (1.6)
13		***Rod***ney King, (1.1) was trying to get in that position.

Once again talk and visual representation mutually amplify each other. Descriptors such as "a charge" (line 4) provide instructions for how to see the highlighted sequence on the easel, while that very same sequence provides seeable proof for the argument being made in the defense attorney's talk. (At the second trial, King testified that he ran after one of the officers said, "We're going to kill you nigger. Run.") At line 13 the defense attorney points with his finger toward the last photo in the series, the one where King is

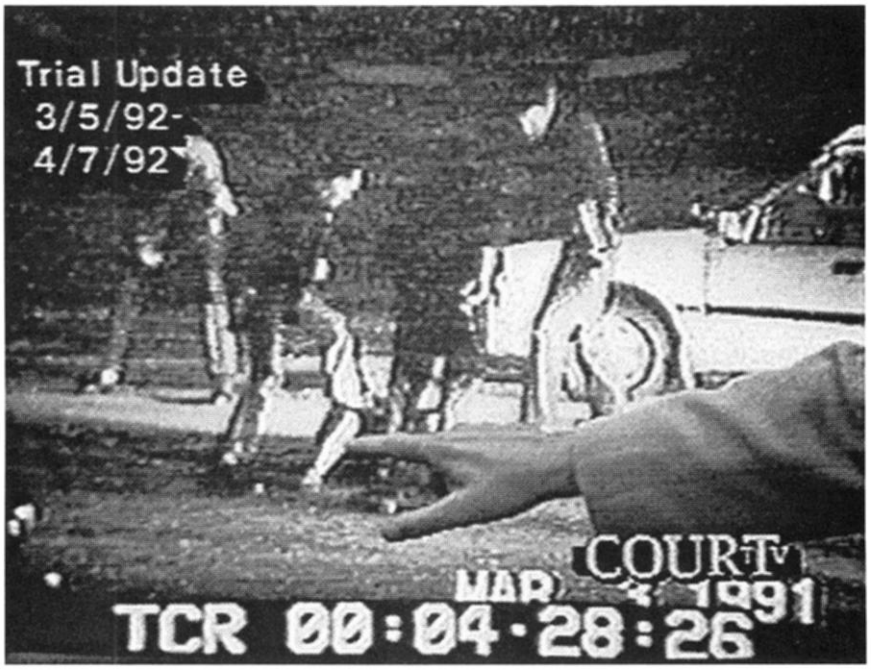


Figure 9
Sergeant Duke discusses officer stepping on King's neck. Historical still of the Rodney King Beating courtesy of George Holliday © 1991 George Holliday. All rights reserved. NO REPRODUCTION OF THIS STILL MAY BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF GEORGE HOLLIDAY.

actually making contact with Officer Powell. This deictic gesture establishes that image as the referent for "that position" at the end of line 13—the attacking position that the defense is arguing Rodney King was repeatedly trying to gain. Traditional work on gesture in interaction (and deixis in linguistics) has drawn a bubble around the perimeters of the participants' bodies. The body of the actor has not been connected to the built world within which it is situated. In these data the graphic display that receives the point is as much a constructed discursive object as the pointing finger or the spoken words; all three mutually elaborate on each other. Theoretical frameworks that partition the components of this process into separate fields of study cannot do justice to the reflexive relationship that exists between the talk, the gesture, and the artifacts that have been built and put in place precisely to receive that pointing. It is necessary to view all these phenomena as integrated components of a common activity.

The Power to Speak as a Professional

I will now briefly investigate the phenomenal structure and social organization that provide the ground from which the power to speak as a professional emerges.

Expert witnesses, such as Sergeant Duke, are entitled to speak about events in the courtroom because of their membership in a relevant community of practitioners. Duke's voice can be heard because he is a police officer, an expert on police use of force, and thus someone who can speak about what the police officers on the tape are perceiving as they look at King writhing on the ground. The structure of Duke's expertise, which gives him his right to speak authoritatively, creates a situated perspective from which events on the tape are viewed.

After demonstrating by playing the videotape that Mr. King appears to be moving his right hand behind his back with the palm up.

1 Prosecutor: That would be the position you'd want him in.=
2 =Is that correct. (0.6)
3 Sgt. Duke: Not, (0.2) Not with uh:, (0.2) the way he is. (0.6)
4 His uh:, (0.4) His leg is uh
5 Is bent in this area. (0.6)
6 Uh:, (0.2) Had he moved in this hand here being uh:
7 (0.4) straight up and down.
8 That causes me concern (0.7)
9 Prosecutor: Uh does it also cause you concern that
10 someone's ***step***ped on the back of his neck.
11 Sgt. Duke: (0.6) No it does not.

Here, as in the data examined earlier, Duke displays intense concern about very small movements of King's leg and hand (lines 4–8). However, when asked about the fact that an officer has stepped on the back of King's neck (see Figure 9), Duke states in effect that violent actions performed by police officers against their suspect cause him no concern at all (lines 9–11). The events on the tape are being viewed and articulated by Duke from a local, situated perspective—that of the police who are beating King—which is precisely his domain of expertise.

Insofar as the perceptual structures that organize interpretation of the tape are lodged within a profession and not an isolated individual, there is a tremendous asymmetry about who can speak as an expert about the events on the tape and thus structure interpretation of it. Here Duke states that his training makes it possible for him to "perceive the perceptions" of the police officers, but that he has no access to the perceptions of the man they are beating, since Duke himself has "never been a suspect":

1 Sgt. Duke They're taught to evaluate.
2 And that's what they were doing in the last two
3 frames.
4 Or three frames.
5 Prosecutor: Can you read their mind uh, (1.4) Sergeant Duke.
6 (1.3)
7 Sgt. Duke: I can, (0.4) form an opinion based on my training.
8 and having trained people,
9 what I can perceive that their perceptions are.
10 (0.6)
11 Prosecutor: Well what's Mr. King's perceptions at this time.
12 (0.6)
13 Sgt. Duke: I've never been a suspect.
14 I don't know.

While administering a beating like this is recognized within the courtroom as part of the work of the police profession, no equivalent social group exists for the suspect. Victims do not constitute a profession. Thus no expert witnesses are available to interpret these events and animate the images on the tape from King's perspective. In the second trial, King was called as a witness, but he could not testify about whether the police officers beating him were using unreasonable force since he lacked "expertise on the constitution or the use of force" (Newton 1993a:A16).

The effect of all this is the production of a set of contradictory asymmetries. Within the domain of discourse recorded on the videotape, it is argued that King is in control of the interaction, and that is what the first jury found. But within the discourse of the courtroom, no one can speak for the suspect. His perception is not lodged within a profession and thus publicly available to others as a set of official discursive procedures.

Within the discourse of the trial, he is an object to be scrutinized, not an actor with a voice of his own. However, within the discourse made visible on the tape, he is constituted as the controlling actor.

The way in which professional coding schemes for constituting control and asymmetry in interaction are used by the police to justify the way that they beat someone alerts us to ethical problems that can arise when we put our professional skills as social scientists at the service of another profession, thereby amplifying its voice and the power it can exert on those who become the objects of its scrutiny.

Conclusion

Central to the social and cognitive organization of a profession is its ability to shape events in the domain of its scrutiny into the phenomenal objects around which the discourse of the profession is organized: to find archaeologically relevant events such as post holes in the color stains visible in a patch of a dirt and map them or to locate legally consequential instances of aggression or cooperation in the visible movements of a man's body. This article has investigated three practices used to accomplish such professional vision—coding schemes, highlighting, and the production and articulation of graphic representations—in the work settings of two professions: an archaeological field excavation and a courtroom.

Such work contributes to efforts by linguistic anthropologists, practice theorists, and conversation analysts to develop anthropologically informed analyses of human action and cognition as socially situated phenomena, activities accomplished through ongoing, contingent work within the historically shaped settings of the lived social world. In this process some traditional dichotomies that have isolated subfields from each other, such as the assignment of language and the material world to separate domains of inquiry, disappear. The ability to build and interpret a material cognitive artifact, such as an archaeological map, is embedded within a web of socially articulated discourse. Talk between coworkers, the lines they are drawing, measurement tools, and the ability to see relevant events in the dirt all mutually inform each other within a single coherent activity. Simultaneously, the practices clustered around the production, distribution, and interpretation of such representations provide the material and cognitive infrastructure that make archaeological theory possible.

Within such a framework, the ability to see relevant entities is lodged not in the individual mind but instead within a community of competent practitioners. This has a range of consequences. First, the power to authoritatively see and produce the range of phenomena that are consequential for the organization of a society is not homogeneously distributed. Different professions—medicine, law, the police, specific sciences such as archaeology—have the power to legitimately see, constitute, and articulate alternative kinds of events. Professional vision is perspectival, lodged within specific social entities, and unevenly allocated. The consequences that this had for who was entitled to instruct the jury about what was happening on the Rodney King videotape support Foucault's (1981) analysis of how the discursive procedures of a society structure what kinds of talk can and cannot be heard, who is qualified to speak the truth, and the conditions that establish the rationality of statements.

Second, such vision is not a purely mental process but instead is accomplished through the competent deployment of a complex of situated practices in a relevant setting. An earlier generation of anthropologists, influenced by Saussure's notion of *langue,* brought precision and clarity to their analytic projects by focusing on the grammars of cultural phenomena such as category systems and myths while ignoring the courses of practical action within which categories and stories were articulated in the endogenous scenes of a society's everyday activities. The procedures investigated in this article move beyond the mind of the actor to encompass features of the setting where action is occurring. Through practices such as highlighting, coding, and articu-

lating graphic representations, categories (post molds, aggression) are linked to specific phenomena in a relevant domain of scrutiny, creating a whole that is greater than the sum of its parts—for example, an actual instantiation of a post mold or a visible demonstration of aggression. As argued by Wittgenstein (1958), a category or rule cannot determine its own application; seeing what can count as a "change of slope" or "aggression" in a relevant domain of scrutiny is both a contingent accomplishment and a locus for contestation—even a central site for legal argument. Categories and the phenomena to which they are being applied mutually elaborate each other.[18] This process is central among those providing for ongoing change in legal and other category systems.

Third, insofar as these practices are lodged within specific communities, they must be learned (Chaiklin and Lave 1993; Lave and Wenger 1991). Learning was a central activity in both of the settings examined in this article, but the organization of that learning was quite different in each. Like students in an anthropology class being lectured about events in another culture, the jury at the Rodney King trial was instructed by an expert about what a police officer (someone who they would never be) could see in the events visible on the tape (see Figure 10). On the other hand, the young archaeologist, crouching in the dirt and struggling to determine where in it to properly position one of the tools of her profession, was learning to be a competent practitioner. The dirt in front of her was a locus for embodied practice, not an object of contemplation.

Consistent with recent research in conversation analysis on the interactive organization of work settings (Drew and Heritage 1992), different ways of learning and their associated modes of access to the phenomena being scrutinized were constituted in each setting through the alternative ways that human interaction was organized. Though ultimately the jury decided the case, throughout the trial its members never had the chance to question the expert witnesses who were lecturing them, but instead sat week after week as a silent audience. They had the opportunity to use the tools relevant to the analysis that they were charged with performing—that is, the opportunity to play the tape themselves—only when they were alone in the jury room. By way of contrast, Ann, the senior archaeologist, was positioned to monitor not only the dirt her student was studying but also embodied actions of that student within a field of relevant action.[19] Instead of being positioned as an expert lecturing to an audience, Ann's own ability to perform a relevant next action was contingent on the competent performance of her student; Ann could not mark her map until Sue had produced a necessary measurement.

Figure 10

Instruction by experts: Sergeant Duke showing police officer perspective; archaeologist showing measurement technique. Historical still of the Rodney King Beating courtesy of George Holliday © 1991 George Holliday. All rights reserved. NO REPRODUCTION OF THIS STILL MAY BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF GEORGE HOLLIDAY.

Each was dependent on the other for the moment-by-moment accomplishment of a common course of action. To make that happen, Ann first provided Sue with successive descriptions of what to look for and then got down in the dirt to point to relevant phenomena, thus adjusting in detail to the problems her student was visibly facing. The necessity of collaborative action not only posed tasks of common understanding as practical problems but also exposed relevant domains of ignorance, a process crucial to their remedy. In brief, though instruction was central to what both the archaeologists and the expert witnesses in the courtroom were doing, within each setting learning processes, encompassing participation frameworks, and modes of access to relevant phenomena were shaped into quite different kinds of events by the alternative ways that interaction was structured.

Despite very marked differences in how each setting was organized, common discursive practices were deployed in both. There seem to be good reasons why the configuration of practices investigated in this article are generic, pervasive, and consequential in human activity. First, processes of classification are central to human cognition, at times forming the basic subject matter of entire fields such as cognitive anthropology. Through the construction and use of coding schemes, relevant classification systems are socially organized as professional and bureaucratic knowledge structures, entraining in fine detail the cognitive activity of those who administer them, producing some of the objects of knowledge around which the discourse in a profession is organized, and frequently constituting accountable loci of power for those whose actions are surveyed and coded. Second, though most theorizing about human cognition in the 20th century has focused on mental events—for example, internal representations—a number of activity theorists, students of scientific and everyday practice, ethnomethodologists, and cognitive anthropologists have insisted that the ability of human beings to modify the world around them, to structure settings for the activities that habitually occur within them, and to build tools, maps, slide rules, and other representational artifacts is as central to human cognition as processes hidden inside the brain. The ability to build structures in the world that organize knowledge, shape perception, and structure future action is one way that human cognition is shaped through ongoing historical practices. Graphic representations constitute a prototypical example of how human beings build external cognitive artifacts for the organization and persuasive display of relevant knowledge. This article has investigated some of the ways in which relevant communities organize the production and understanding of such representations through the deployment of situated practices articulated within ongoing processes of human interaction.[20] Human activity characteristically occurs in environments that provide a very complicated perceptual field. A quite general class of cognitive practices consists of methods for highlighting this perceptual field so that relevant phenomena are made salient. This process simultaneously helps classify those phenomena, for example, as an archaeological feature rather than an irrelevant patch of color in the dirt, or as an aggressive movement. Practices such as highlighting link relevant features of a setting to the activity being performed in that setting.

In view of the generic character of the issues that these practices address, it is not surprising that they frequently work in concert with each other, as when Sergeant Duke's pointing finger linked a category in a coding scheme to specific phenomena visible in a graphic representation. The way in which such highlighting structures the perception of others by reshaping a domain of scrutiny so that some phenomena are made salient, while others fade into the background, has strong rhetorical and political consequences. By looking at how these practices work together within situated courses of action, it becomes possible to investigate quite diverse phenomena within a single analytical framework. As these practices are used within sequences of talk-in-interaction, members of a profession hold each other accountable for—and contest—the proper perception and constitution of the objects of knowledge around which their discourse is organized.[21]

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Notes

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1. See Bourdieu 1977, Chaiklin and Lave 1993, Hanks 1987, and Lave and Wenger 1991 for contemporary work on practice theory. Analyses of how cognition makes use of phenomena distributed in everyday settings can be found in Lave 1988, Rogoff 1990, Rogoff and Lave 1984, and Suchman 1987. Hutchins (1993) provides a very clear demonstration of how cognition is not located in the mind of a single individual but is instead embedded within distributed systems, including socially differentiated actors and external representations embodied in tools. Dougherty and Keller (1985) demonstrate how cognitive frameworks and material features of a setting mutually constitute each other. Recent work by linguistic anthropologists on the discursive constitution of context can be found in Duranti and Goodwin 1992. Work on activity theory (Engestrõm 1987; Wertsch 1985) growing out of the pioneering work of Vygotsky (1978) has long stressed the mediated, historically shaped character of both cognition and social organization. Though focused on the organization of sequences of talk rather than tool-mediated cognition, the field of conversation analysis (Atkinson and Heritage 1984; Drew and Heritage 1992; Sacks 1992; Sacks et al. 1974) has developed the most powerful resources currently available for the analysis of the interactive organization of emerging action with actual settings (Goodwin 1990), including the way in which each next action relies on prior action for its proper interpretation while simultaneously reshaping the context that will provide the ground for subsequent action.

2. For example, see Ochs 1979 and Scheiffelin and Doucet 1994.

3. See Heritage 1984 and Sacks et al. 1974.

4. For further discussion, see Du Bois et al. 1993, Gumperz 1982, Sherzer and Woodbury 1987, and Tedlock 1987.

5. An elaboration of this system can be found in Sacks et al. 1974 on pp. 731–733.

6. See Haraway 1989, Latour 1987, Latour and Woolgar 1979, Lynch 1985, Lynch and Woolgar 1988, and Pickering 1992.

7. Archaeologists distinguish between post molds and post holes. In order to place a post that will support a roof or other structure, people frequently dig a pit substantially larger than the post itself. After the post is in place, dirt is packed around it to support it. The larger pit is called a post hole, while the hole created by the post itself is called a post mold.

8. See Garfinkel 1967, Goodwin 1992, and Heritage 1984.

9. For analysis of how graphic representations are articulated in the mist of scientific practice, see Goodwin 1990 and Ochs et al. 1994. The more general issue of graphic representations in the discourse of science has been an important topic in the sociology of scientific knowledge (for example, Lynch 1988 and Lynch and Woolgar 1988).

10. For analysis of how participants read the movement of another's body through socially defined space, see Duranti 1992.

11. For extensive analysis of the reflexive relationship between socialization and language, see the work of Ochs and Scheiffelin (for example, Ochs 1988; Ochs and Schieffelin 1986; Scheiffelin 1990; Scheiffelin and Ochs 1986).

12. The practices at issue here have consequences for not only the production of such maps but also their reading. Competent archaeologists know that the dots on a map, the only points

in the landscape that have actually been measured, have a different status than the lines connecting the dots. Thus they will sometimes discard the lines and rely only on the dots for subsequent analysis.

13. See Drew 1992, pp. 472–474, and Shuy 1982.

14. I am deeply indebted to Lucy Suchman for bringing the phenomena discussed in this paragraph to my attention.

15. The prosecution arguments at the second trial noted here are drawn from my notes made at the closing argument and from newspaper reports.

16. The ability to record events on videotape and replay them in the court created baroque possibilities for layering and framing the perception of events. At the second trial, one of the defendants, Officer Briseno, chose not to testify. However, the prosecution received permission to play for the jury videotape of his testimony at the first trial in which he criticized the actions of the other defendants. "That placed jurors in the federal trial in the unusual position of watching a defendant on one videotape describe yet another videotape" (Newton 1993b:A25). The jury was able to watch "as the taped Officer Briseno spoke from the monitor accompanied by the word *Live,* while the real Officer Briseno sat passively with the other defendants, following his own year-old words on a transcript" (Mydans 1993a:A14).

17. The notion of what events constitute "clutter" to be eliminated is of course an important political decision being made by the party who reshapes the image for presentation to the jury.

18. See Goodwin 1992, Heritage 1984, and Keller and Keller 1993.

19. The most thorough analysis of how archaeology is learned as a mode of embodied practice can be found in Edgeworth 1991.

20. See also Goodwin 1990.

21. Professional settings provide a perspicuous site for the investigation of how objects of knowledge, controlled by and relevant to the defining work of a specific community, are socially constructed from within the settings that make up the lifeworld of that community—that is, endogenously, through systematic discursive procedures. This should not, however, be taken to imply that such processes are limited to professional discourse. The way in which we reify our realities through practices such as highlighting and coding are pervasive features of human social and cognitive life.

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