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Professional Vision

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Using as data videotapes of archaeologists making maps, and lawyers animating events visible on the Rodney King videotape, this article investigates the discursive practices used by members of a profession to shape events in the phenomenal environment they focus their attention upon, the domain of their professional scrutiny, into the objects of knowledge that become the insignia of their profession: the theories, artifacts and bodies of expertise that are its special domain of competence and set it apart from other groups. Seeing is investigated as a socially situated, historically constituted body of practices through which the objects of knowledge which animate the discourse of a profession are constructed and shaped. Analysis focuses on three practices, coding schemes, highlighting, and the articulation of graphic representations, which are articulated in a work relevant way within sequences of human interaction. Through the structure of talk in interaction members of a profession hold accountable for, and contest, the proper constitution and perception of the objects that define their professional competence.

Professional Vision

This article investigates the discursive practices used by members of a profession to shape events in the domain of professional scrutiny they focus their attention upon. 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 are its special and distinctive domain of competence. 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] Two contexts of professional activity are examined: archaeological field excavation and legal argumentation. In each of these contexts three practices are investigated: 1) **coding schemes** used to transform the materials being attended to in a specific setting into the objects of knowledge that animate the discourse of a profession; 2) **highlighting**, making specific phenomena in a complex perceptual field salient by marking them in some fashion; and 3) **the production and articulation of material representations**. By applying such practices to phenomena in the domain of scrutiny, participants build and contest **professional vision**, 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 policemen charged with beating Mr. Rodney King, an African-American motorist who had been stopped for speeding, a videotape of the

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[1]See Bourdieu (1997), Chaiklin and Lave (1993), Hanks (1987) and Lave and Wenger (1991) for contemporary work on practice theory. Analysis of how cognition makes use phenomena distributed in everyday settings can be found inLave 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 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. A collection of recent work by linguistic anthropologists on the discursive constitution of context can be found in Duranti and Goodwin 1992). Work on Activity Theory (Wertsch 1985; Engeström 1987) 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, Schegloff and Jefferson 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 upon prior action for its proper interpretation while simultaneously reshaping the context that will provide the ground for subsequent action.

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 tape, 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 King trial provides a vivid example of how the ability to see a meaningful event is not a transparent, psychological process, but is 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 (e.g. 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 unit being investigated is thus analogous to what Wittgenstein 1957: §7) called a **language game**, a "whole, consisting of language and the actions into which it is woven."

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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. In light of this it is 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 they are attending to 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 it permits repeated, detailed examination of actual sequences of talk and embodied work practices in the settings where practitioners actually perform these activities. Moreover iothers 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 of the material analyzed in the present paper is drawn from one of the American field schools. Tapes of the first Rodney King trial were made from the broadcasts of Court TV. I was unable to record the entire trial, and my own recordings were supplemented by buying the edited summary of the trial prepared by 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 (Ochs 1979; Scheiffelin and Doucet 1992. 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 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 (Heritage

1984 ; Sacks, Schegloff and Jefferson1974). This has required developing methods of transcription that permit analysis in detail 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 (Du Bois et. al. 1993; Gumperz 1982 ; Sherzer and Woodbury 1987 ; Tedlock 1987). 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
p. 608 with a very complicated issue. In all other respects my transcription uses the system developed by Gail Jefferson (Sacks, Schegloff and Jefferson : 731-733) for the analysis of conversation. The conventions most relevant to the analysis in the present paper include the use of ***BoldItalics*** to indicate talk spoken with special emphasis, a left bracket [to mark the onset of overlapping talk, and numbers in parentheses, e.g. (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," that there is no interval between the end of one unit and the beginning of a next. Transcribers' comments are italicized in double parentheses; talk enclosed with single parentheses indicates 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

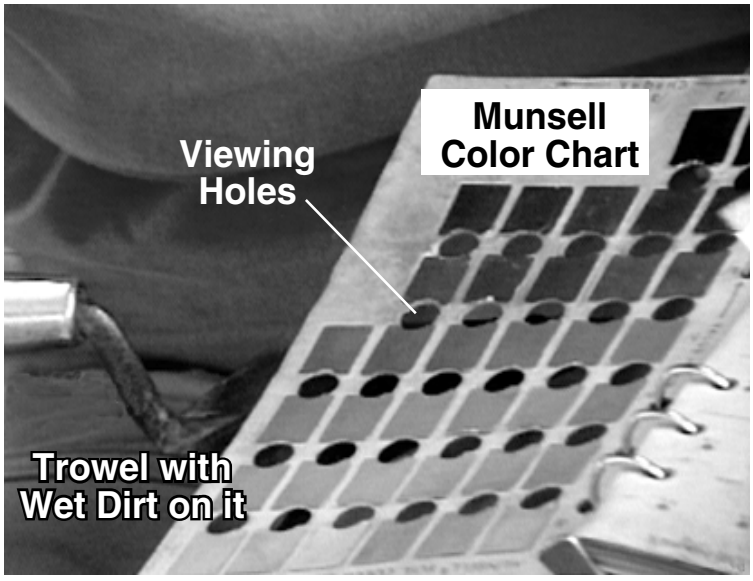
Central to the organization of human cognition are processes of classification. **Coding schemes** are one systematic practice used to transform the world into the categories and events that are relevant to the work of the profession (Cicourel 1964, 1958). For example, linguists classify sounds in terms 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 (Haraway1989; Latour 1987; Latour and Woolgar 1979; Lynch

1985; Lynch and Woolgar 1988;; Pickering 1992). 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.

This process will be briefly investigated at a field school being used to train young archaeologists. The medium that archaeologists work in 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. Indeed, 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 piece of dirt, the students must obtain a sample with a trowel, highlight it by squirting it with water, and then hold the sample under holes cut into the Munsell color chart:



The Munsell book encapsulates in a material object theory and solutions developed by earlier workers faced with this task of classification (Hutchins 1993). The pages juxtaposing color patches and viewing holes that allow the dirt to be seen right next to the color sample provide an historically constituted architecture for perception.

Though apparently distant from the abstract world of archaeological theory, and the debates that are currently animating the discipline, this encounter between 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.

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Despite the rigorous way in which a tool such as this structures perception of the dirt being scrutinized, finding the correct category is not an automatic, or even easy task (Goodwin 1993a). Indeed 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. Indeed 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. In so far as the coding scheme establishes an orientation toward the world, it constitutes a structure of intentionality whose proper locus is not the isolated, Cartesian mind, but a much larger organizational system, one that is characteristically mediated through mundane bureaucratic documents such as forms. Through forms with their coding schemes, a senior investigator inscribes her perceptual distinctions into the work practices of the technicians who code her 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
p. 610 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 post-it 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 upon 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, and thus become 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. The archaeologist attempts to locate *features* such as these post molds[2] by scrutinizing the earth as she digs. 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**. (Garfinkel 1967; Goodwin 1992; and Heritage 1984). 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.

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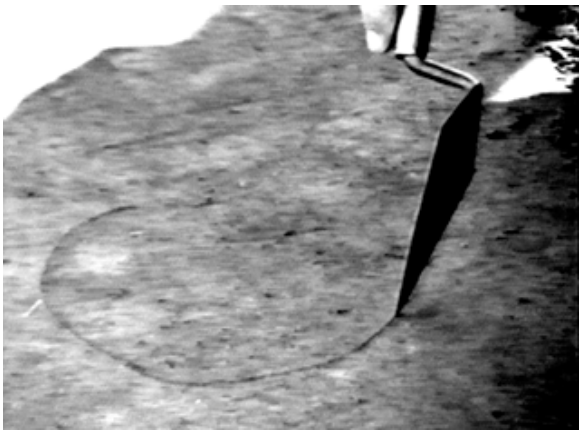
[2]Archaeologists make a distinction between post molds and post holes. In order to place a post that will support a roof or other structure people frequently dig a pit substantially larger than the post itself. After the post is in place dirt is packed around it to support it. The larger pit is called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

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 her trowel.



By doing this she establishes a figure in a what is quite literally a very amorphous ground. The 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 perception of
p. 611 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 upon 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, e.g. archaeological features, that are the concerns of her profession.

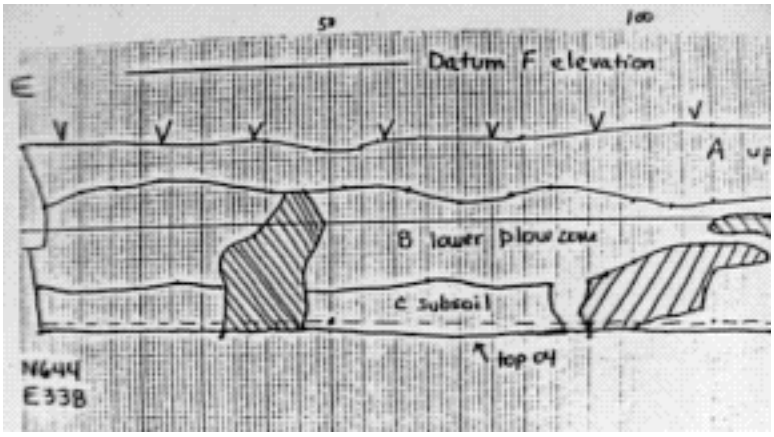
Graphic Representations as Embodied Practice

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. Indeed, scientific talks and papers are best seen not as a purely linguistic text, but instead as a reflexive commentary on the diagrams, graphs and photographs that constitute the heart of a presentation.[3] 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

[3]For analysis of how graphic representations are articulated in the mist of scientific practice see Goodwin (1993b) and Ochs, Gonzales and Jacoby in press). 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 Lynch1988 and Lynch and Woolgar1988).

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 can't, 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 the following map:



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 excavate a site. Such maps provide one of the distinctive forms of professional literacy that constitute archaeology as a profession.

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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. She reports her measurements as pairs of numbers, e.g. "At forty, plus eleven point five."

A second archaeologist transfers the numbers provided by the measurer to a piece of graph paper. After plotting a set of points 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 that has not even occurred yet?

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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 that counts as a proper next bit of talk, 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.[4]

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 can now be analyzed by Ann as elements of the activity she has been asked to perform, and found wanting. Immediately after this Ann produces her correction (lines 4-5).

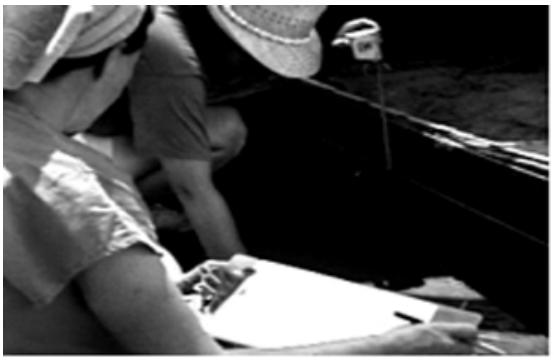
Additional elements of cognitive operations that Ann expects Sue to perform in order to make her measurements are revealed as the sequence continues to unfold. Making the relevant measurements presupposes the ability to locate where in the dirt measurements should be made. However Sue's response to the 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 zero and ninety (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, i.e., "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

[4]For analysis of how participants read the movement of another's body through socially defined space see Duranti (1992).

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 (image **A**):



A **B**

9		(2.0)
10	Ann:	See so if it's ***fair***ly ***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-

At this point, instead of relying upon 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," i.e. "where it <u>stops</u> being flat." (line 11) She then points to additional places for measurement (lines 13-17).

Calling what Ann does here either deitic gesture or ostensive definition does not do adequate justice to its complexity. Analysis of the gesture cannot focus on the gesture alone or some possible mental state of the speaker it is externalizing (effectively drawing an analytic bubble at the skin of the actor), but requires simultaneous attention to the environment that the hand is highlighting, the talk which sets its addressee a coding problem, and the activity that these participants are working to accomplish. Talk and gesture mutually elaborate each other within a framework of action that includes at least three components: 1) a semantic description, e.g. “a change in slope”; 2) a complex

p. 614 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 ostenstive demonstrations emerge, provide a relevant language game that can be used to make inferences about precisely what 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, 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 field work, as well as a local interactive field which 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 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 which 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,[5] there is a growth in intersubjectivity 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 get the job at hand done, such that Sue is finally able to understand what Ann is asking her to do, that is understand in a manner that permits her to make an appropriate, competent response to Ann's request.

p. 615 It would, however, be quite wrong to see the unit within which this intersubjectivity is lodged as simply these two minds coming together in the work at hand. Instead the distinctions being explicated, the ability to see in the very complex perceptual field provided by the landscape they are attending to, 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

[5]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).

archaeologist, and to use that seeing to build the artifacts, such as this map, which are constitutive of archaeology as a profession. Such seeing would be expected of any competent archaeologist; it is an essential part of what it means to **be** an archaeologist[6] and it is these professional perceptual standards that Sue is being held accountable to. 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 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.

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 policemen 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 there was public outrage and four policeman 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 on it was so graphic that many people assumed that a conviction was almost automatic. However, the jury found the policemen innocent, a verdict that triggered the Los Angeles uprising. At a

[6]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 upon the dots for subsequent analysis.

second Federal trial a year later two of the officers were convicted of violating Mr. King's civil rights, and two were acquitted.

Perhaps surprisingly, the main evidence used in the defense of the policemen was the tape showing them beating Mr. King. Indeed, one of the officers convicted in the second trial, Sgt. 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 of his house. Rather than wanting to minimize the events on the tape he told a reporter (Mydans 1993d: A10) 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.'

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: 7).

p. 616 However the lawyers defending the policemen 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 craft work, a form of professional discourse with the victim, in which he was a very active co-participant, indeed the party who controlled the interaction.

To successfully make this claim the defense provided the jury with both ethnography about police practices, and 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. Basically 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 policemen who beat King perceived him to be doing. These perceptions were not treated as idiosyncratic,

phenomena lodged within the minds of individual policemen, but instead 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 instead frameworks shared by a profession, **expert testimony** becomes possible. An expert, who was not present at the scene, can describe authoritatively what the policemen 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 (Drew 1992: 472-474; Shuy 1982). 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 defendant Briseno:

> 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 policemen 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:

- If a suspect is aggressive the proper police response is escalation of force in order to subdue him.
- 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 described through appropriate language drawn from the social sciences is produced. In the words of one expert:

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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 Mr. 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 display 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 (i.e. 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 craftwork. 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 Mr. King into custody. (*Interview with Court TV))*

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 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
p. 618 included not only the batons that they were beating him with, but also the kicks that they gave him:

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 ***ki***cks,

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

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 policemen themselves were required to evaluate Mr. 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 policemen 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 Powell, the officer who landed the most blows on Mr. 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 Duke from the Los Angeles Police Department as an expert on the use of force by the police.

Commentators on the first trial considered Sgt. Duke the most important and persuasive witness in the case.

At the point where we enter the following sequence the prosecutor has noted that Mr. King appears to be moving into a position appropriate for handcuffing him, and that one officer is in fact reaching for his handcuffs, i.e. 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 Mr. King visible on the videotape should be coded as cooperative or aggressive. By noting both submissive elements in Mr. 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 Mr. King again would be unjustified, and the officers should be found guilty of the crimes they are charged with. The contested vision being debated here has very high stakes.

p. 620

To rebut the vision proposed by the prosecutor, Sgt. Duke uses the semantic resources provided by language to code as aggressive extremely subtle body movements of a man lying face down 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 6,8,13) 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 Such structuring of the materials provided by the imaage is accomplished not only through talk, but also through gesture. As Sergeant Duke speaks he brings his hand to the screen and points to the parts of Mr. King's body that he is arguing display aggression.

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 which it was articulating mutually elaborated each other. Here the touchable events on the television screen provide visible **evidence** for the description constructed through talk. What emerges from Sgt. Duke's testimony is not just a *statement*, a static category, but a *demonstration* built through the active interplay between 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 emerges, while simultaneously Mr. King, rather than the officers becomes the focus of attention as the expert's finger articulating the image delineates what is relevant within it.

p. 621

By virtue of the category systems erected by the defense, the minute rise in Mr. King's buttocks noted on the tape unleashes a cascade of perceptual inferences that have the effect of exonerating the officers. A rise in Mr. King's body becomes interpreted as aggression, which in turn justifies an escalation of force. Like other parties faced with a coding task, the jury was 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 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 micro-analysis of the movements being made by that man's body to see if it is exhibiting aggression.

The expert witnesses of 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.[7] 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 (e.g. 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 Mr. King is characterized both as an almost mindless, moving force (e.g. "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. These become the triggering mechanism for a typified process which it is argued that the police are required to respond to 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 (Lieberman1993a: 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 a motive for the beating, namely that the policemen were teaching a man who'd been disrespectful to them a lesson (Mydans 1993c:), and ways of seeing the movements of Mr. King's body that Sgt. Duke highlighted as normal reactions of a man to a beating,

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

rather than as displays of incipient aggression. In the prosecution's argument Mr. 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 templates instructed the jury to look even at the body behavior of the policemen who were not physically hitting Mr. King, to see them as nonchalantly watching a beating rather than poised to subdue a still dangerous suspect. Instead of restricting focus to the body of Mr. King, the prosecution drew the jury's attention to the slender stature of Officer Briseno, who was 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. Mr. King was being portrayed 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.[8] 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 were not made available to the first jury.

p. 622 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, 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. One of the very interesting things about expert testimony in court is the way in which it 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.

In so far 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;

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

second, scrutiny by those in court, including the jury and expert witnesses, as they assess the scrutiny of the police; [9] and third within the framework of this paper there is yet another level of scrutiny as we examine 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, Mr. 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 Mr. 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 Mr. 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 Mr. King's body on top of the photos:

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[9]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).

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 forty seven times with metal clubs was reasonable and justified. By virtue of the figure/ground relationship established through such highlighting, the policemen, 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 Mr. 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 that one is trying to concentrate upon. The work of the viewer is radically changed when these scenes are transformed into the photographic array. Movement through time becomes movement through space (i.e. 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[10] in the original images is eliminated by cropping the photos.

p. 623 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

[10]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.

5-8 below; line 13, where the defense lawyer makes a pointing gesture is marked with a ☛):

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" 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 Mr. 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
p. 624 where Mr. King is actually making contact with Officer Powell. This deictic gesture establishes that image as the referent for "that position" at the end of line 13, i.e. the attacking position that the Defense is arguing Rodney King was repetitively trying to gain. Traditionally 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 utterance being spoken. All three mutually elaborate each other. Theoretical frameworks that partition the components of this process to 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 of these phenomena as integrated components of a common activity.

The Power to Speak as a Professional

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

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. Sergeant Duke's voice can be heard because he is a policemen, an expert on police use of force, and thus someone who can speak about what the policemen on the tape are perceiving as they look at Mr. King writhing around on the ground. The structure of his expertise, which warrants his right to speak authoritatively, creates a situated perspective from which events on the tape are viewed.

p. 625

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

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

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

In so far 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. In the following Sergeant Duke is talking about the perceptions of the police:

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

While administering a beating like this is recognized within the courtroom as the craft work of a 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 his perspective. In the second trial Mr. King was called as a witness. However he could not testify about whether the policemen 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 this is what the first jury found. However 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
p. 626 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 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, as social scientists we put our professional skills at the service of another profession, and amplify its voice and the power it can enforce over 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 world it is focusing its attention upon into the phenomenal objects around which the discourse of the profession is organized:, e.g. to find archaeologically relevant events such as post holes in the color stains visible in a patch of a dirt and map them, 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 developed anthropologically informed analyses of human action and cognition as socially situated phenomena, e.g. activities accomplished through ongoing, contingent work within the historically shaped settings of the lived social world. In this process some traditional dichotomies which 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 co-workers, 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 makes archaeological theory possible.

Within such a framework the ability to see relevant entities is not lodged 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 supports 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 something accomplished through the competent deployment in a relevant setting of a complex of situated practices. 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 paper move beyond the mind of the actor to encompass features of the setting where action is occurring. Through practices such as highlighting, coding,
p. 627 and articulating 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, e.g. an actual instantiation of a post mold, a visible demonstration of aggression. As argued by Wittgenstein's 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, indeed a central site for legal argument. Categories and the phenomena to which they are being applied, mutually elaborate each other (Goodwin 1992; Heritage 1984; Keller and Keller 1993), and indeed this is precisely one of the central processes that provides for ongoing change in legal and other category systems.

Third, in so far as these practices are lodged within specific communities they must be learned (Chaiklin and Lave1993; Lave and Wenger 1991), and indeed learning was a central activity in both of the settings examined in this article. However 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 policemen, someone who they would never be, could see in the events visible on the tape.

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 they never had the chance to question the expert witnesses who were lecturing them, but instead sat week after week as a silent audience. They only had the opportunity to use the tools relevant to the analysis that they were charged with performing, e.g. actually play the tape themselves, 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 were studying, but also embodied actions of that student within a field of relevant action.[11] Instead of being positioned as an expert lecturing to an audience, Ann's own ability to perform a relevant next action was contingent upon the competent performance of her student, e.g. Ann could not mark her map until Sue had produced a necessary measurement.
p. 628 Each was dependent upon 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, where shaped into quite different kinds of events by the alternative ways that interaction was structured within each setting.

Despite very marked differences in how each setting was organized, common discursive practices were deployed in both. There seem be to good reasons why the configuration of practices investigated in this paper 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

[11]The most thorough analysis of how archaeology is learned as a mode of embodied practice can be found in Edgeworth (1991).

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 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 twentieth century has focused on mental events, e.g. internal representations, a number of activity theorists, students of scientific and everyday practice, ethnomethodologists and cognitive anthropologists have consistently 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 (see also Goodwin1993b). 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 that perceptual field so that phenomena relevant to the activity the participants are engaged in are made salient, a process that simultaneously helps classify those phenomena (e.g. as an archaeological feature rather than an irrelevant patch of color in the dirt, 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 e.g. 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 both hold each accountable for, and contest, the proper perception and constitution of the objects of knowledge around which their discourse is organized.[12]

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Notes

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[12]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, i.e. 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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