Chapter 9

Pointing as Situated Practice

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One of the legendary moments in American baseball occurred during the third game of the 1932 World Series when Babe Ruth, with two strikes against him and the game tied, pointed to center field and then hit the next pitch to where he had pointed for a home run. The classic version of this story has, however, been challenged on numerous occasions. For example, Woody English, the captain of the team opposing Ruth, claims that Ruth never pointed:

> Babe Ruth did *not* call his H.R. I was playing third base that game and he held two fingers up indicating two strike[s]—The press indicated he pointed, which he did *not*—He never said he called it. When asked, he replied "the papers *said I did*." (Martin, 1996, p. E7; italics original)

Both the reporters and Woody English saw exactly the same posture assumed by Babe Ruth's body at a crucial moment: In the midst of his turn at bat, after having swung twice at the ball and missed, Ruth raises his arm into the air in front of him, and extends a finger or two. In the legend the arm with its extended fingers performs the action of pointing toward a particular place; for Woody English, Ruth's hand was displaying the number *two*, the current strike count.

The action that Ruth performed cannot be defined within a framework that focuses on his body in isolation, for example, disambiguating a point-

ing from a counting hand through ever finer analysis of postural configuration and hand shape. Instead, each version of the event is built by juxtaposing to the visible configuration of Ruth's body a different set of phenomena selected from the scene in progress. The legend, by depicting Ruth pointing, links his arm to a specific place in the surrounding scene. That place is not a mere, undifferentiated space, but a highly structured cultural entity, a playing field. The legend would be impossible if Ruth were described pointing to a part of the field where a hit ball would be classified as foul. This configuration of an actor's body displaying intentional orientation to a culturally formulated space is then tied to a second event that occurred a short time later: hitting the ball to the place pointed at for a home run. Note that in making this link, a host of other events that also occurred within the park during this time (e.g., the actions of other team members, fans eating hotdogs, etc.) are treated as irrelevant. By way of contrast, Woody English's version links the upraised hand not to a space in the surround or a future action, but instead to prior events in the unfolding course of a turn at bat. Here something that was invisible in the legendary account, the number of fingers being raised, emerges as crucial for the visible production of a particular kind of action, for example, using the hand to display a number. The encompassing game and the events that had just occurred provide grounds for seeing the fingers as referring to the strike count, rather than something else. In short, the particular action being seen selectively parses the scene within which it is embedded, including a gesturing hand, by bringing a particular subset of culturally formulated phenomena into juxtaposition with each other while ignoring others. Pointing is not a simple act, a way of picking out things in the world that avoids the complexities of formulating a scene through language or other semiotic systems,[1] but is instead an action that can only be successfully performed by tying the act of pointing to the construals of entities and events provided by other meaning making resources as participants work to carry out courses of collaborative action with each other.

[1]Pointing has frequently been treated as a simple, indeed primitive technique for doing reference, a way of directly indicating entities in the immediate environment that avoids the complexity of formulating what is being indicated through semiotic systems such as language. From such a perspective, pointing tied to practices such as naming can act as the crucial bridge between the categories provided by an abstract mental calculus such as language and the objects in the world around us. Thus, in a passage that constituted the point for departure for Wittgenstein's (1958) critique of the unproblematic use of ostensive definition to link language to objects in the world (see also Quine, 1971), Saint Augustine (1996, I.8) stated that "When they (my elders) named some object, and accordingly moved toward something, I saw this and I grasped that the thing was called by the sound they uttered when they meant to point it out."

POINTING AS A SITUATED INTERACTIVE ACTIVITY

A central locus for the act of pointing is a situation that contains at least two participants, one of whom is attempting to establish a particular space as a shared focus for the organization of cognition and action. Within such a field, pointing is constituted as a meaningful act through the mutual contextualization of a range of semiotic resources including at least (a) a body visibly performing an act of pointing; (b) talk that both elaborates and is elaborated by the act of pointing; (c) the properties of the space that is the target of the point; (d) the orientation of relevant participants toward both each other and the space that is the locus of the point; and (e) the larger activity within which the act of pointing is embedded.[2] In the remainder of this chapter this process is investigated by looking in detail at the organization of pointing in videotapes of multiparty talk-in-interaction recorded in two settings: (a) an archaeological field excavation, and (b) conversations in the home of man almost completely unable to produce spoken language because of a stroke. The catastrophically limited speech production of the man with aphasia (he can speak only three words) vividly demonstrates how the ability of both participants and analysts to easily, indeed almost transparently, find meaning in gesture is very much a situated accomplishment. Without the semiotic shaping of both space and the act of pointing provided by a rich language system, this man and his interlocutors must go to considerable work to establish where he is pointing (e.g., the location and conceptual structure of the space that is the target of his point) and what he is trying to say with an act of pointing. However, precisely because he has such limited ability to produce speech (although he has excellent ability to understand the talk of others), this man makes extensive use of points toward spaces already sedimented with meaning in his lifeworld as a way of trying to say something to others, the catch of course being that all of these spaces can be seen and understood in multiple ways. What is required to understand this process is study of how a complex visual field that must be parsed and understood in a congruent fashion by multiple participants is structured and elaborated through language, pointing, and mutual action. The work of the archaeologists as they articulate for each other the visibility and structure of relevant phenomena in the dirt they are excavating provides one site for such investigation.

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[2]See Agha (1996), Hutchins and Palen (1997), and Ochs, Gonzales, and Jacoby (1996) for other most relevant analysis of how gestural meaning is accomplished through the mutual elaboration of multiple semiotic fields. Haviland (1993a, 1993b, 1996) provided extensive analysis of how pointing is organized with reference to both narrated spaces and directional coordinates.

DEFINING FEATURES AS ARCHAEOLOGICAL PRACTICE

A perspicuous site for the study of pointing can be found in work environments where participants must establish for each other how a relevant space should be construed in order to perform the tasks that make up the work of their setting. This chapter focuses on a group of archaeologists excavating an ancient native American village. Pointing is pervasive in their work, in large part, because archaeologists in the field are repetitively faced with the task of locating with precision relevant entities in the complex visual field provided by the dirt they are excavating, and of agreeing how to classify what they see. Issues posed for the analysis of pointing within such an environment can best be demonstrated through a specific example. Some brief background on the work of the archaeologists is necessary.

Many phenomena of interest to archaeologists, what they call *features* (Fig. 9.1), are visible only as color changes in the dirt they are excavating. For example, the cinders produced by an ancient hearth will leave a black stain, and the decaying material in an old posthole will produce a tube of dirt with color systematically different from the soil around the post. The activity of excavating features systematically destroys them. As dirt is removed to dig deeper, the patterns of visible color difference are destroyed. In part because of this, careful records, including maps, photographs, and coding forms of various types, have to be kept of each stage in the excavation. The data we examine were collected during one of the first working days of an archaeological field school. Personnel at the school included

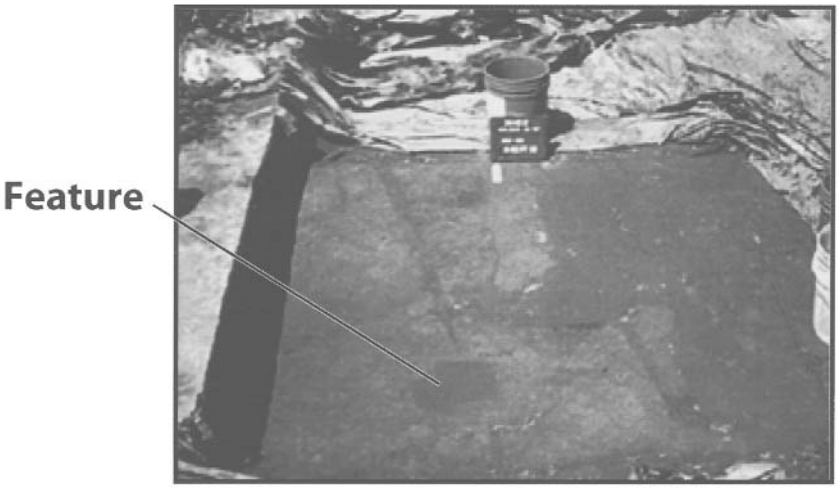

FIG. 9.1. Archaeological features.

*A*nn, the senior *a*rchaeologist, graduate students with different levels of experience, undergraduates, and volunteers. For some of the newcomers, this is their first experience performing actual excavation. At the end of the last digging season, the current structure of the site was protected from weather and vandalism by covering exposed surfaces, including the features then visible, with dirt. The archaeologists are now removing this layer of dirt and comparing the surfaces they uncover with the maps made during the previous season.

JUXTAPOSING MULTIPLE SEMIOTIC FIELDS TO ACCOMPLISH POINTING

Example 1 (Fig. 9.2) provides an opportunity to examine some of the different kinds of phenomena implicated in a single act of pointing. Ray Jones, a graduate student, calls the senior archaeologist, Ann Wesley, and shows her a feature he has found (Ann's laughter, dimmed in the transcript, is not relevant to the present analysis). In line 10, Ray shows Ann a feature. One of the places where that feature can be found in the current scene is on a map that Ray is holding on a clipboard. Over the word *found* in line 10 he uses his trowel to point to the image of that feature on the map. A number of different kinds of sign systems, instantiated in different semiotic media, are relevant to the organization of this point. First, there is the *pointing gesture*, here the hand using the trowel. That gesture points toward a particular place in the surround, a *domain of scrutiny*, where the addressee should look to find the *target* of the point, the particular entity being pointed at. Here the particular domain of scrutiny being pointed at is a map, a *graphic field* within which signs of a particular type can occur, in this case graphic representations of phenomena to be found in another territory.

The system that provides organization for the entities that can function as targets of a point is called the *activity framework*. An activity framework can encompass a number of different kinds of phenomena. Thus, on a baseball diamond the physical object that marks a base is not simply a bag, but a game-relevant semiotic object of a particular type. Similarly, by virtue of their placement on the graphic field constituted by a map, irregular squiggles are situated within a complex relationship both toward each other and to the territory that they describe. A second component of the activity framework is the encompassing activity that endows phenomena such as a graphic field and the semiotic objects situated within it with particular kinds of relevance; for example, the maps being used here constitute specific kinds of tools within the larger process of archaeological excavation that defines the work of this setting. A single domain of scrutiny can con-

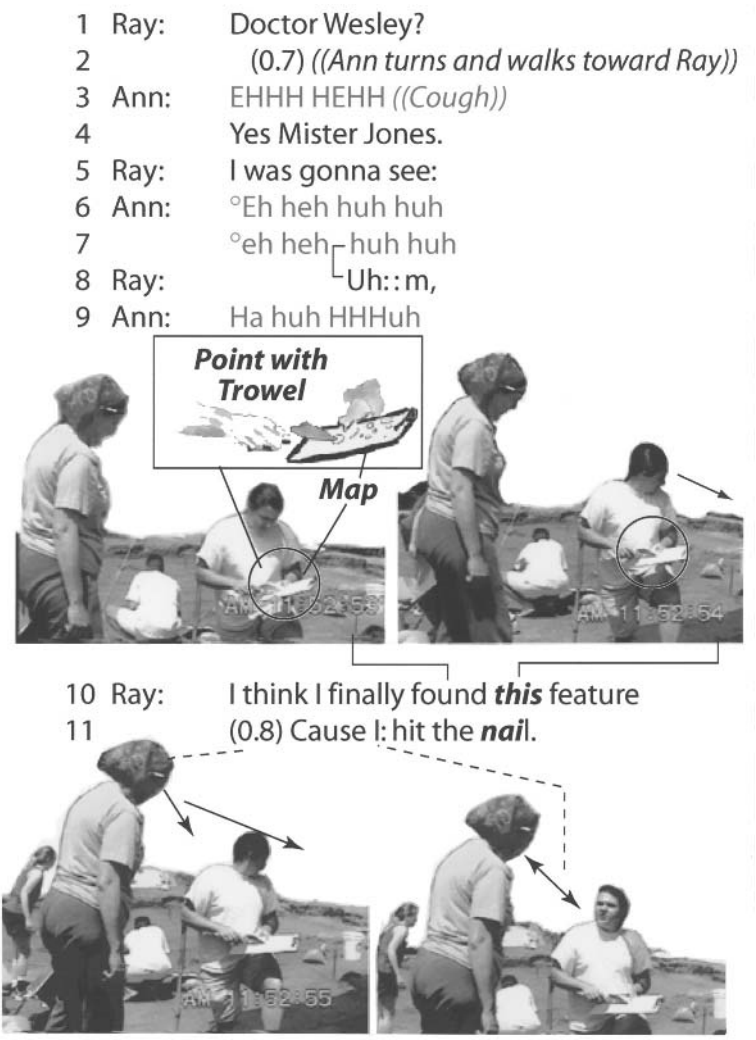

FIG. 9.2. Example 1: Multiple targets.

tain multiple targets linked in complex ways to a variety of different activity frameworks. An example is provided later when interaction with the man with aphasia is examined.

As an embodied action, a pointing gesture is lodged within a larger *hierarchy of displays being performed by the body* of the party doing the point. Just before he performs the trowel point, Ray picks up the map and gazes toward it, and thus displays to others that the map is the explicit focus of his current attention. The trowel point thus occurs within a larger framework of

postural orientation by the pointer, which also displays focus toward the domain of scrutiny relevant to the action of the moment.

Insofar as the point is being performed precisely to show someone else where the feature is to be found, *addressee orientation* is as relevant as the postural orientation of the pointer. Indeed, here Ray goes to considerable work to secure the orientation of his addressee, summoning her by name in line 1, and delaying the performance of his action until she is positioned to perceive it (note, for example, the "Uh::m" in line 8 and the silence that follows it). The separate, interlocking displays of pointer and addressee form a whole that is greater than the sum of its parts, a particular kind of *participation framework*.

Note that the participation framework relevant to the act of pointing includes not only orientation toward other participants (e.g., the situation described by Goodwin, 1981, in which speakers work to secure the orientation of a hearer before producing a complete utterance), but also orientation toward specific phenomena located beyond the participants in the surround. How these different possible foci of orientation (e.g., other participants versus targets in the surround) may be organized relative to each other within the activity of pointing is investigated shortly.

Crucial semiotic resources for shaping what is pointed at, and what is being done through a point, are provided by the talk that typically co-occurs with the point. In the present data, two different kinds of signs within Ray's utterance are briefly noted. First, the deictic term *this* not only instructs the hearer to attend to something beyond the talk itself, that is, the point, to locate what is being indicated, but also specifies that what is being pointed at is a single, countable entity (e.g., *this* not *these*), that is being formulated in terms of its thinglike attributes, as opposed to, say, the locative formulation that would result from use of a alternative deictic such as *here* or *there*. Second, the *semantic structure* of the term *feature* construes what is being pointed at as a particular kind of entity, for example, a cultural structure of interest to the archaeologists (as opposed to, say, a rock).

However, although located on the map, "*this* feature" has a second instantiation in a quite different spatial framework: the dirt being excavated. Moreover, both of these spatial frameworks are implicated in what is being said in Ray's utterance: Ray is reporting that he has found in the dirt a feature specified on the map. Over the word "*this*" in line 10 Ray moves his head away from the map and visibly gazes toward the place in the dirt that he is talking about. As a deictic term, *this* points toward a referent that exists in two separate, mutually relevant spaces in the current scene, the map and the dirt (which provide two quite distinct graphic fields for their separate targets). As Ray speaks the word "*this*" his body makes visible a complex pointing gesture, with the hand and trowel indicating one of the places where the entity identified through the semantic structure of his talk is to

be found, while his gaze locates the second. Although the trowel point is no longer framed by his gaze toward the map, the postural configuration of his lower body and the sustained orientation of both of his hands toward the map continue to mark that field as the primary locus of his ongoing orientation (for detailed analysis of how the lower body displays a primary orientation framework see Kendon, 1990, and Schegloff, 1989). Through the way in which he organizes his point, Ray visibly indicates that what is being pointed at exists simultaneously in two different spaces in the local surround.

What consequences does this *dual point* have for the coparticipation of his addressee in the activity of pointing? Does she attend to the multiplicity of spaces that he marks as relevant? As the utterance begins, Ann is just finishing walking toward Ray. As soon as she stops she looks briefly at the map, the place indicated by Ray's trowel, and then leans forward to look over the map toward the dirt that is the target of his gaze. Her actions thus visibly orient to both of the spaces indicated by his complex point. Finally, as further demonstration of how what is at issue here is shared seeing embedded within collaborative action, Ray then moves his gaze away from the dirt back to Ann. From this position he can both take into account her looking and possible responses, and locate her as the addressee of his continuing talk.

Rather than being a simple way of indicating some prelinguistic "thing" in the surround, the pointing that occurs here is a complex semiotic act accomplished through the juxtaposition of an array of quite different kinds of meaning-producing systems. Within the activity of pointing, participants are faced with the task of attending to multiple visual fields, including both the region being pointed at and each other's bodies. Indeed, as seen here, within pointing a progression of gaze shifts is frequently found; for example, the pointer may initially look toward the region being pointed at and then to the addressee in order to both judge the addressee's orientation (e.g., has he or she looked toward the appropriate region) and evaluate how he or she is responding to the action being performed through the point. Similarly, the addressee is typically faced with the task of using something in one spatial field—the pointer's body—to locate something else in a different spatial field. Rather than just looking somewhere, coparticipants engaged in pointing are faced with the task of coordinating multiple visual fields if they are to successfully accomplish the activities in progress.

Moreover, one of these fields, the human body, is quite unlike most other visual phenomena in the scene. Within interaction the body is a dynamic, temporally unfolding field that displays a reflexive stance toward other coparticipants, the current talk, and the actions in progress. As demonstrated through their responses to the displays made visible in each other's bodies (e.g., performing the point only after the addressee is positioned to see it, looking toward the various spaces indicated by the pointer's

body, etc.), Ann and Ray treat each other's bodies as fields that provide a mutable locus for the ongoing production of intentional action. Moreover, the visible body is a complex entity that can construct multiple displays that mutually frame each other (e.g., points can be framed by larger postural configurations). The body is thus a very different kind of entity than, say, the *feature* that constitutes the target(s) of the points here. Thus, parties engaged in the activity of pointing must attend to not only multiple visual fields, but fields that differ significantly in their structure and properties.

Pointing is accomplished through the juxtaposition of very different kinds of semiotic phenomena (the body, talk, structures of different kinds in the surrounding scene, etc.). How is this heterogeneity within a common course of action to be analyzed? A framework is needed that can encompass both the differentiated actions of multiple participants (e.g., the party performing the point, and responsive actions of his or her addressee[s]) and a diverse collection of signs lodged within media with quite different properties (e.g., talk, gesture, visible structure in the field being pointed at, such as a map, etc.). Other work on the organization of talk-in-interaction has demonstrated the value of analyzing a course of recognizable action as a *situated activity system* (Goffman, 1961; C. Goodwin, 1996; M. H. Goodwin, 1990; Goodwin & Goodwin, 1987). For example, a concurrent assessment (e.g., two participants simultaneously evaluating something through both overlapping talk and visible embodied displays of affect and appreciation—see Goodwin, 1996, for an actual example) integrates into a common course of action syntactic and semantic structure, intonation, gesture, participation frameworks, and inferential processes projecting events that haven't actually occurred yet, into a common course of interactively sustained action. In this chapter, pointing is investigated as a situated activity system in which action is built by assembling diverse semiotic resources into locally relevant multimodal packages, which I have elsewhere analyzed as contextual configurations (Goodwin, 2000a).

APHASIA: POINTING WITHOUT A SEMANTIC CONSTRUAL

In the data just examined, many of the organizational frameworks being described converge at precisely the same place. Thus, when Ray's trowel touches his map, it locates with fine precision in a single space a target, a graphic field, and a domain of scrutiny, while his talk formulates that target as a particular kind of entity. Are these alternative frameworks simply distinctions being made by the analyst, or do participants orient to them differentially as they perform the tasks made relevant by the activity of pointing? To probe this issue, data of a quite different kind are briefly examined

before returning to the archaeologists. Because of a massive stroke, Chil has been left with the ability to say only three words, *Yes*, *No*, and *And*. Elsewhere (Goodwin, 1995, 2000b) I described how Chil is nonetheless able to perform relevant conversational action, and say quite subtle things, by embedding his sparse vocabulary and gesture within larger sequences of talk produced by others. Frequently, as in the data examined here, what Chil wants to say is worked out through a sequence in which his interlocutors produce guesses that he accepts or rejects. Example 2 occurred after Chil and his son Chuck had finished breakfast and were making plans for what to do that day. The sequence begins when Peggy calls from another room and suggests a walk. After securing Chuck's gaze, Chil in line 7 points toward something on the table between them. For clarity, proposals Chuck makes about what Chil might be pointing at are highlighted with boxes (Fig. 9.3). Using Chil's outstretched finger as a guide, Chuck correctly treats the table between them as the domain of scrutiny where the target of the point is to be found. However, the kitchen table is the base of a complex space that contains many different kinds of objects, such as a plate with an assortment of pastries, a box of Kleenex, a plastic cup that held the morning's pills, newspapers, silverware, the table itself, and so on. Moreover, Chil is unable to produce co-occurring talk that would formulate the target as particular kind of entity and thus constrain the search. Locating the target of the point becomes a practical problem for Chuck, who produces a series of guesses—"Bagel." "Put this away?" "Chocolate." "Do you want something to eat?"—before at last establishing that what is being pointed at is his newspaper with its movie schedule. As Chuck guesses incorrectly, Chil responds by leaning forward in an attempt to move his pointing finger past the plate of pastries that Chuck repetitively returns to. However, in the absence of a semantic gloss this movement can also be read as an attempt to get the pastry plate itself, and Chuck responds to Chil's second point by moving the plate toward him. Only when Chil finally moves his finger entirely past the plate during the silence in line 18 does Chuck at last shift his attention to the movie schedule in the newspaper that now lies directly under Chil's pointing finger. In these data the way in which the *domain of scrutiny*, the *target*, *co-occurring talk*, and temporally unfolding changes in *the body of the party performing the point* constitute distinct phenomena differentially implicated in the activity of pointing is clear.

Note that in attempting to figure out where Chil is pointing, Chuck is not simply trying to locate the target of the point, that is, successfully accomplish reference, but is simultaneously attempting to locate the action Chil is performing—that is, does he want something to eat, or the table to be cleared, or movies to be checked. The way in which seeable targets are each embedded within webs of recognizable activities is central to this process. As noted earlier, the term *activity framework* is used to refer to a candi-

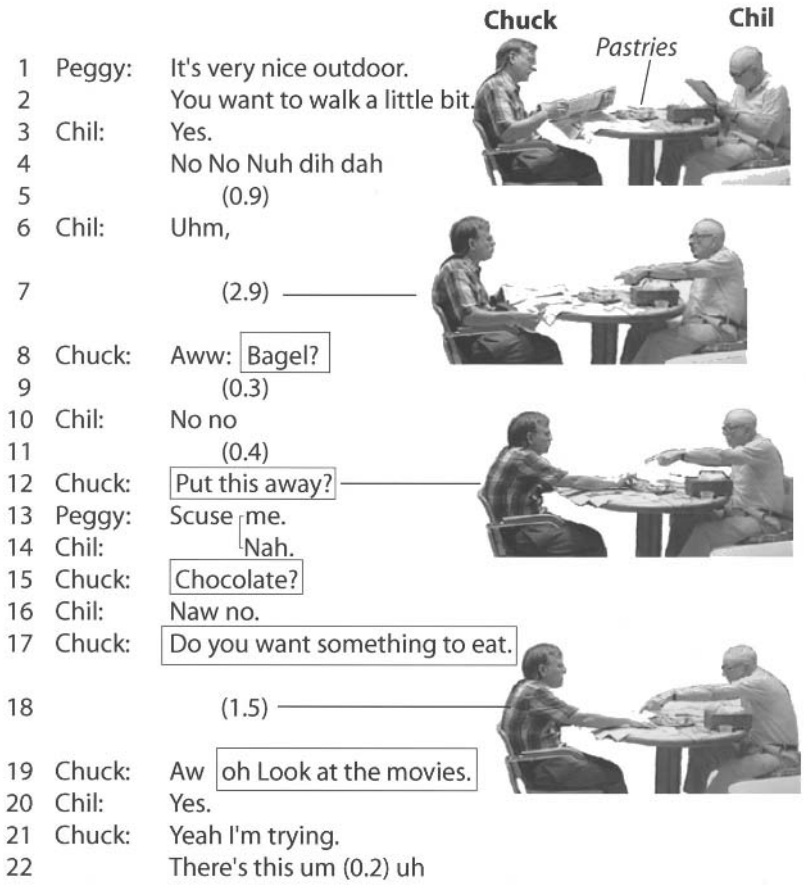

FIG. 9.3. Example 2: Finding the target.

date target, such as a bagel or a newspaper, and the webs of recognizable activities within which that target is embedded. Although different targets make relevant different activity systems—for example, bagels but not newspapers are eaten—each target is embedded within multiple activities that can overlap with activities appropriate to another target (e.g., both leftover bagels and newspapers are things to be put away when the table is cleared after breakfast). Moreover the entities that can serve as the targets of points can themselves be quite complex activity frameworks, such as the newspapers being read here, which contain within them news, comics, ads, pictures, movie and television schedules, and so on.

The way in which the objects that inhabit his lifeworld are already sedimented with visible, public meaning and tied to typical courses of ac-

tion provides Chil with crucial semiotic resources for saying something meaningful to others despite his lack of speech. For example, by pointing toward a thermostat in his living room, he can be seen as requesting that the temperature in the house be changed. Indeed, it is the systematic availability of such differentiated but relevant structure in his environment that makes pointing such a crucial resource for Chil. However, as we see here, the multiplicity of phenomena within a single domain of scrutiny poses for addressees the task of locating which of the available candidates is the target of the point. Indeed, the practical problem faced by Chil's interlocutors of using his pointing finger to parse the current scene and its candidate actions in a relevant fashion by selecting an appropriate subset of phenomena from a host of competing possibilities provides a mundane, real-world example of the interpretative issues raised by Babe Ruth's legendary point to a future home run.

A final resource that is central to the organization of Chil's point in the data we have been examining is the *sequential framework* (Sacks, 1992/1995; Schegloff, 1968) provided by the talk from which Chil's initial point emerges. In line 2, Peggy suggests that Chil take a walk. Chil's point is being used to invoke an alternative to Peggy's suggestion for how to spend the afternoon. The activity of pointing is prefaced by a *No* tied to Peggy's proposal, and this formulates the point as offering something that stands in contrast to what was said there. The point emerges within a field already endowed with meaning. Going to the movies, but not having a bagel, constitutes an alternative to "walk a little bit" as a way to spend the time after breakfast. It appears that Chuck, who is intently looking at the paper until summoned by Chil, does not hear this, and thus produces guesses that are inconsistent with the framing provided by Chil's point as an alternative to something said in earlier talk. Chuck's failure to take this into account demonstrates how assembling the mix of multiple semiotic fields that is relevant to the appropriate construal of a particular act of pointing is not something automatic or specified in advance, but is instead a contingent accomplishment.

TRACING: SUPERIMPOSING ICONIC SHAPE ON A POINTING GESTURE

Returning to the archaeological data, Example 3 (Fig. 9.4) provides an example of a different kind of dual point. Once again the participants are trying to locate in the dirt a feature marked on the map that Ray is holding on a clipboard. As Ray's utterance begins, his index finger is tracing the shape of the feature being examined on the map. He has just solicited Jane's gaze, and the finger highlighting a particular spot on the map provides a way of showing her, and probably himself as well, the precise placement and shape

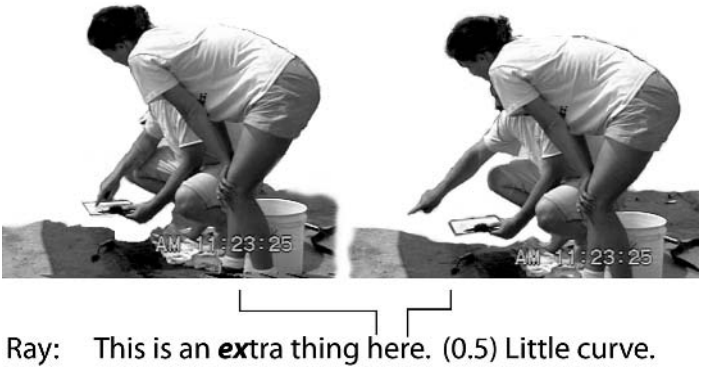

FIG. 9.4. Example 3: Tracing.

of the feature on the map. Ray's index finger remains on the map until the beginning of the word *here*. While speaking *here*, he moves his pointing finger from the map to the instantiation of the feature in the dirt. Thus, while pronouncing this word he points at two quite distinct, although intimately linked, spaces. Here, rather than doing dual points with separate parts of his body (e.g., gaze and hand), a single moving gesture points toward two quite different spaces, both of which contain what is being pointed at. Note that his talk does not formulate what is happening as a moving series of discrete points that targets two contrasting semiotic entities (e.g., the sequence of separate points to different places over *this* and *that* in a phrase such as "It should be on this table, not that one"). Instead, what is being pointed at is formulated as singular: "an extra thing." However, that "thing" manifests itself in two separate spaces that are treated as equivalent loci for the co-occurring *here*, and that both constitute almost simultaneous (e.g., within the scope and duration of a single monosyllabic deictic term) targets of a single, albeit moving, point. Rather than performing primitive reference to a prelinguistic "thing" in the surround, Ray's pointing finger sits at the nexus of a complex process through which the semiotic construals provided by multiple meaning-producing systems (semantic structure, the map, seeable structure in the dirt being excavated, the framing of the action provided by Ray's body and Jane's visible orientation, the encompassing task, etc.) are juxtaposed to each other so as to permit their mutual elaboration in a way that is relevant to the work at hand (e.g., finding the phenomena on the map in the dirt in front of them).

In most typologies of gesture (see McNeill, 1992, p. 76, for a summary), *iconic* gestures and *deictic* (pointing) gestures are treated as separate kinds of gesture. This does not seem to be correct. Pointing gestures can trace the shape of what is being pointed at, and thus superimpose an iconic display on a deictic point within the performance of a single gesture. Instead of us-

ing this distinction to separate gestures into distinct classes, it seems more fruitful to focus analysis on an *indexical component* or an *iconic component* of a gesture, either or both of which may contribute to the organization of a particular gesture (see also Clark, 1996, p. 159).

The features that archaeologists focus on typically manifest themselves as irregularly shaped patches of color in the dirt being excavated. Quite frequently an archaeologist will not simply point toward a feature with his or her finger or a trowel, but will instead trace the shape of the feature with a moving point. Thus, just before Ray moved from the map to the dirt in the data just examined, he traced the shape of the "extra thing" on the map (i.e., moved his finger around the line defining its shape), and then when his pointing finger reached the dirt, again traced a shape while glossing it as "little curve." Through this *tracing* an *iconic representation* is superimposed on the indexical orientation of the point. Note that the *resemblance* between gesture and referent that constitutes iconicity can be specified in terms of the relationship between the gesture and two quite distinct semiotic fields: (a) the semantic structure of the talk, and (b) visible phenomena in the domain of scrutiny being pointed toward. Thus, here Ray's tracing movement has an iconic tie to both (a) *curve* in the stream of speech, and (b) the pattern in the dirt under his moving finger. Each of these construals of what is pointed at contextualizes the others. Most previous work on gesture has focused on ties between the gesture and only one of these fields, the talk. Thus for McNeill (1992, p. 78), "a gesture is *iconic* if it bears a close formal relationship to the semantic content of the speech." In the experimental situation used by McNeill, the entity being described through the gesture, a scene on a cartoon that the subject had just seen, was no longer present. McNeill recognized the crucial importance of looking not just at the speech, but also at the scene being described. However, because that scene was not actually present, phenomena such as tracing were inaccessible to analysis.

Tracing has a number of consequences. First, the moving finger and the target of the point are brought into a dynamic relationship in which each is used to understand the other. The activity of pointing continues after reference per se has been accomplished. Second, tracing provides a way of indicating precise information about what is pointed at, such as the exact shape of a color stain in the dirt, that would be difficult to specify through language alone. Third, typologies of gesture have almost completely ignored those that get their distinctive organization from the way in which the gesturing body interacts with other phenomena within a domain of scrutiny, such as tracing, touches, and so on (but see LeBaron, 1998; LeBaron & Streeck, 2000; and Streeck, 1996a, 1996b, for powerful demonstrations of how gesture is tied to its environment and analysis that is most relevant to the points being argued here). However, as anyone who has ever attended a scientific talk, a military briefing, a planning meeting, and so on, or even

looked at a finger-smeared computer screen, can testify, such gestures are absolutely central to the way in which the work of the world gets done.

INSCRIPTION

When the act of tracing leaves a mark in the domain of scrutiny, it creates an *inscription*. There is an intimate, systematic progression within pointing from tracing to inscription. As he or she traces the outline of a proposed feature in the air above an a set of color patches, an archaeologist typically holds a trowel, the default tool used to excavate features. When defining a feature (outlining its shape in the dirt as a preliminary to mapping it), the point of the trowel is lowered just enough to cut into the dirt itself so that the tracing movement leaves a mark. The tracing point is thus transduced into a new medium, the dirt, where it leaves an enduring mark (Fig. 9.5). Leaving a visible trace of a pointing gesture within the field being pointed at has a range of consequences. A few are briefly noted. First, such inscription constitutes a form of *highlighting* (Goodwin, 1994), a way of reorganizing a domain of scrutiny in terms of the tasks of the moment. Indeed, through inscription the material structure of the domain of scrutiny is transformed through pointing. Second, this can act as a powerful rhetorical move. In the midst of an argument about whether or not a particular set of color patches does in fact provide evidence for a feature, or where the boundaries of a feature should be located, such inscription can lead others

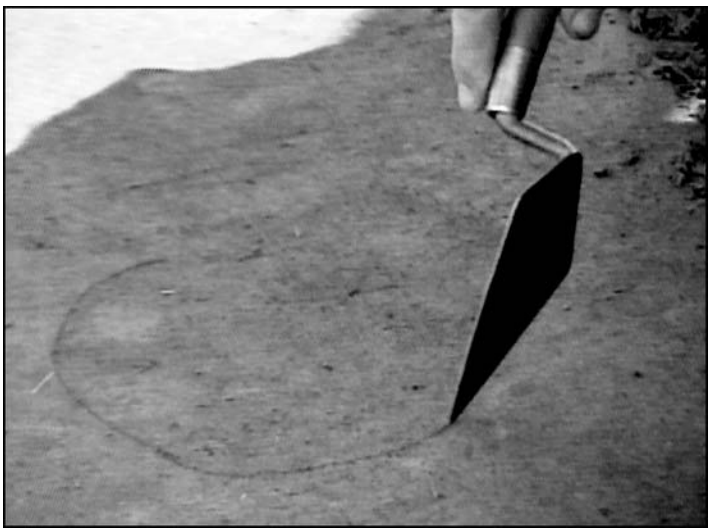

FIG. 9.5. Inscribing.

to see the shape it delineates as forming the pattern being argued for. Third, such inscription creates a special kind of liminal representation. Unlike what happens when the pattern is further transduced, say into a map, here the representation and the entity being represented coexist within the same perceptual field, and thus remain in a state where each can be used to judge the other. Fourth, by virtue of the way in which the original pointing action now has a new physical and temporal existence, new forms of mediated action become possible. In Example 4, a young *s*tudent, *S*ue, is defining a feature under the watchful eye of her *a*rchaeology professor, *A*nn (i.e., to help the reader easily see who is who in the transcripts the name beginning with *S* is a *s*tudent, and the name beginning with *A* is a senior *a*rchaeologist). Immediately after Sue finishes her inscription, Ann moves her own pointing finger just to the side of the student's line, and traces a slightly different path (Fig. 9.6). Here one person's pointing finger is carrying on a dialogue with the trace of another's gesture inscribed in the dirt. The inscription provides a precise record, enduring in time, that the professor can use to evaluate the work-relevant seeing of her student. In turn,

Ann: En I- I would'a put it
a ***ti::ny*** bit out there.
(0.2)
Ann: But ***tha***t's no big deal.
Sue: °Okay.
(0.5)
Ann: But do you ***see***: *hhh uhm
(0.6)
Ann: Right there.
(1.5)
Ann: ┌Okay.
Sue: └I didn't see that one at all.

FIG. 9.6. Example 4: Gesture dialogue.

within this public field of visible, meaningful action, the student can see how the professor would organize the very same materials that she has been working with. Inscription here provides an arena within which the judgments required to perform the practices used to constitute the phenomena that define the work of a community (e.g., the mapping of features within archaeology) can be publicly calibrated.

PROGRESSIVE REFORMULATION THROUGH CHANGING POINTS TO A COMMON TARGET

Inscription provides a particularly clear example of how pointing can transform features in the domain of scrutiny being pointed at, and of how this might be relevant to the social organization of the embodied practices that constitute the work of a profession. However, such transformations can be accomplished in other ways as well, for example, through the semantic construals that accompany a series of linked points. In Fig. 9.7 the same

FIG. 9.7. Example 5: Progressive reformulation.

patch of color stains in the dirt is described in three different ways: (a) as a *problem area*, (b) as a *stripe*, and (c) as a *plow scar*. Each of these terms formulates what is being pointed at in a quite different way.

POINTING AS ACTION

The formulation of the space being pointed at as a *problem area* in line 6 of Fig. 9.7 is linked to a number of different action frameworks, and this is done not only through talk, but also through the precise way in which Ann's point here is done. As the sequence begins, Sue is tracing the outline of a feature, a postmold. In lines 1–5 Ann is intently scrutinizing Sue's moving trowel while praising her performance. Ann's point in line 6 and the statement about arrival at the problem area that accompanies it are not sequenced to actions in other talk, but instead occur precisely at the moment when Sue's trowel is about to extend the inscription into the space being formulated as a "problem area." The arm movement that brings Ann's point to the space being indicated almost touches Sue's moving trowel. When this happens, Sue quickly retracts the trowel and thus stops tracing. Indeed, if the sequence is viewed without sound, it looks like Ann's pointing movement has the effect of pushing Sue's hand away. The possibility that Ann might be attempting to stop Sue from continuing further is quite consistent with the formulation of the space being pointed at as a *problem area*; for example, because of the disturbance intruding into the postmold, its outline shouldn't be traced until it is examined more carefully. The past tense and distal temporal deictic used in line 6 also project that the ongoing action being observed in lines 1–5 has come to some type of completion (e.g., not "And *now* we *get* to our problem area" but "And *then* we *got* to our problem area"). In brief, in addition to indicating a relevant space, the embodied performance of Ann's point constrains Sue's ongoing action in a manner that attends to the temporally unfolding configuration of activity and task-relevant graphic field; it stops the tracing at the place where it enters the problem area. Note how this action depends on Ann's point being simultaneously contextualized by an array of different semiotic fields. Thus, in addition to indicating a target in a particular graphic field that is shaped as a domain of collaborative scrutiny through both the joint visual focus of multiple participants and the work being performed there, it also functions as a visible action within the current participation framework by intruding into the line of orientation being sustained through Sue's gaze and moving hand. Simultaneously, Ann's point constitutes a particular kind of move within the encompassing activity of outlining a feature. The force of that move as something designed to terminate an ongoing action is further specified by the grammatical organization (e.g., past tense) and semantic structure (problem area) of the talk that co-occurs with the point.

LEARNING TO SEE AS A PROFESSIONAL THROUGH POINTING

The ensemble of action in line 6 not only orients to the course of action it emerges from, but also looks forward by the setting the agenda for a future course of action. The term *problem area* constitutes a *prospective indexical* (Goodwin, 1996, p. 384). Although the space being pointed at is characterized in a particular way, the nature of the problem with it is not specified. What precisely that consists of is something to be developed in subsequent interaction.

Ann immediately instructs Sue as to why this space should be seen as a problem through an ensemble of coordinated talk and pointing. As she asks rhetorically in line 9 "Why is it a problem?", her hand moves from right to left over the color patches that will be described in line 10 as a stripe. This gesture both anticipates and puts her body in position for the semantic and gestural exposition of this same line of patches that will occur in line 10. As her hand starts this gesture, it switches from a pointing index finger to an inverted *U* shape. The area within the *U* seems to mark the width of the color patches that will later be described as a "stripe." Although the talk in line 9 does not yet offer a solution to the question it poses, both the place where that solution will be found and some of the semantic features that will be used to characterize it (e.g., a long, straight extended space with seeable width, i.e., some of the defining features of a "stripe") are already being made visible with Ann's gesture.

Ann then sweeps her index finger in a long line over the dirt, tracing the shape of the color stain while characterizing the entity being pointed at as a stripe. This stripe is treated as something that can be readily seen and recognized: "you can see this stripe coming through." This unproblematic visibility of an entity of a particular type is made possible through a range of resources, including the shared public space that is being pointed at, the work that Ann performs to ensure that Sue is looking right where she is pointing, and the way in which the term *stripe* is lodged within a descriptive frame of reference that can be applied generically to particular types of patterns on diverse visible surfaces from paintings to jackets to landscapes. It offers a neutral characterization of structure being treated as clearly visible on the surface being examined. Note, however, that it is not at all clear that Sue would have seen, recognized, or focused on this pattern without Ann's exposition. The combined activity of description and pointing has made salient and relevant to the activities of the moment a particular kind of entity that is now clearly positioned in front of them.

After Sue acknowledges this in line 11, Ann, in line 13, describes this same pattern in a quite different way: "En it looks like (.) a plow sca:r?" Instead of offering a neutral description of phenomena being treated as

clearly visible on the surface being examined, this new characterization of the color stain proposes a theory about no longer visible agents or processes that might have caused such a pattern—that is, the stripe was made by a plow moving through the dirt. The weakened epistemic status of this characterization is marked with the phrase "it looks like."

POINTING AS DEMONSTRATION

In line 15 (Fig. 9.8), the properties of the plow scar are further elaborated through a new, quite different, combination of talk and gesture. Ann holds her hand in a loose cup shape, with fingers facing to her left, that is, toward the line formed by the color stain, and moves the hand from right to left over the space she's just described as a plow scar. As she does this she says (line 15) "En it looks like they were goin this way." This gesture, which makes visible the direction and motion of the plow, is quite different from the earlier pointing gestures. In those, a pointing finger led the eye of the addressee to something beyond the finger: the dirt being pointed at. Here the moving hand is itself the focus of vision, and what is being referred to and characterized is not the dirt, but the motion of the invisible plow "going this way." This is indicated not only by the term *way* as the complement to the deictic term *this* indexing the gesture, but also by the new hand shape, which no longer points to the dirt below it, but instead focuses gaze on the hand and the direction in which it is moving. This gesture is still a form of pointing, only now what is being pointed at and demonstrated through the pointing motion is a direction rather than a specific place in the dirt. Although not being pointed at, the dirt being explicated remains a most relevant constituent of the field of action that provides the gesture with its visible intelligibility, as demonstrated through the way in which the hand moves right above the stripe. Like the liminal inscribed outline of a feature traced within an amorphous patch of color differences, the moving hand and the seeable structure in the dirt beneath it mutually elaborate each other while both are further construed by the talk that accompanies the gesture. Although what is being described occurred long ago, that past

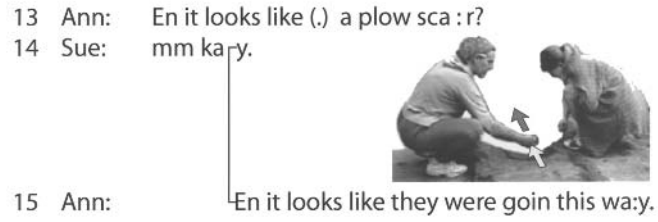

FIG. 9.8. Example 6: Seeing the past in the present.

event is not a self-contained narrative bubble, but instead something that can only be perceived by attending to specific phenomena in the here and now. The current scene, and specifically the visible structure in the dirt under Ann's moving hand, interpenetrates the narrated past. Indeed, what Sue is being taught through the web of action invoked through this pointing is how to see the past in the present, by looking at its visible traces through the eyes of an archaeologist.

What has been seen in this sequence provides further support for the argument that what is being indicated with a pointing gesture is not a simple place or space, but a complex semiotic object constituted through the mutual conjunction of multiple meaning-producing systems. Here the same spot in the dirt is constituted as a series of quite different kinds of entities through changes in the semiotic fields within which the point is embedded. Although this is most clearly demonstrated through changes in semantic frameworks (*problem area* ⇒ *stripe* ⇒ *plow scar*), it is also constituted through relevant changes in the practices of pointing, such as the different hand shapes and movement patterns that distinguish a point toward the stripe from a demonstration of the plow moving through the dirt.

This act of locating something in a complex visual field, and thus dividing that field into a salient figure against a more amorphous ground, while using the semantic resources of language to construe what is to be seen there can have enormous rhetorical and political consequences. In the trial of the Los Angeles policemen who beat Rodney King, the pointing finger of a witness defending the policemen shaped what could be seen on the videotape of the beating in a way that led to the acquittal of the policemen. By pointing to Rodney King, indeed touching his image on the screen, the witness established Mr. King's actions as the focal event in the scene, while the policemen who were beating him faded into the background (see Goodwin, 1994, for more extended analysis of this process). Simultaneously, the witness used semantic categories such as *aggressive* to formulate Mr. King as the instigator rather than the recipient of the violence in progress. The power of pointing to structure what is to be seen in a domain of scrutiny transformed the tape that had led to the policemen being charged with a crime into the evidence that exonerated them.

In the plow scar data, through a sequence of pointing elaborated by other semiotic systems, Sue is being taught not only to see in a complex visual field the entities that constitute the working environment of her profession, postmolds for example, but also to see such entities as embedded within a complex layering of space and time. The native American postmold that is the focus of her current work is to be seen as something deformed by the work of later farmers. Moreover, by attending to the patterning of color in the dirt, Sue can even figure out in what direction that plow was moving. Such seeing is not available to just any speaker of English. I cannot do it.

However, being able to see the world in this way is central to what it means to be an archaeologist. Such seeing is a publicly organized constitutive feature of the profession of archaeology. Through the act of pointing, the senior archaeologist is able to juxtapose in a work-relevant fashion the visual field being scrutinized, the dirt that constitutes the primordial ground for all subsequent archaeological theory, semantic categories for describing and locating relevant entities within that field, and seeable evidence for the processes that shaped what can now be seen. Ann's moving finger weaves together into a single coherent package two semiotic modalities—visual fields populated by structured phenomenal entities, and language—in a way that is central to the cognitive organization of her profession.

CONCLUSION

This chapter has attempted to demonstrate that pointing is an inherently interstitial action, something that exists precisely at the place where a heterogeneous array of different kinds of sign vehicles instantiated in diverse semiotic media (the body, talk, phenomena in the surrounding scene, etc.) are being juxtaposed to each other to create a coherent package of meaning and action (see also Goodwin, 2000a). The heterogeneity of phenomena implicated in even a single act of pointing poses a range of methodological and theoretical problems, and indeed an enormously successful strategy for analysis has involved ignoring the structural diversity of multiple semiotic fields by isolating relatively independent, self-contained subsystems for study (e.g., language, space, gesture, etc.). Why then study pointing? A primordial site for the organization of human action, cognition, language, and social organization consists of a situation within which multiple participants are building in concert with each other the actions that define and shape their lifeworld (e.g., excavating an archaeological site, playing baseball, making plans for the day after breakfast, etc.). In this process, they make use of both language and semiotic materials provided by their setting (tools, objects sedimented with meaning and activity, culturally defined spaces such as playing fields, kitchen tables, maps, structure visible to an archaeologist as color differences within a patch of dirt, etc.). The issues posed for the analysis of action in such a setting involve not simply the resources provided by different semiotic systems as self-contained wholes, but also the interactive practices required to juxtapose them so that they mutually elaborate each other in a way relevant to the accomplishment of the actions that make up the setting. Pointing provides an opportunity to investigate within a single interactive practice the details of language use, the body as a socially organized field for temporally unfolding displays of meaning tied to relevant action, and material and semiotic phenomena in the sur-

round. Looking at these issues in a different way, the semantic system of a language would be extraordinarily cumbersome if it had to provide separate terms for all the possible shapes that could be distinguished in even as simple a domain of scrutiny as a patch of dirt. However, the work of adequately locating and characterizing relevant phenomena in the surround can be readily accomplished within talk-in-interaction if sign systems containing different kinds of resources for construing phenomena, such as language and pointing, are used in conjunction with each other. For example, tracing provides resources for displaying an almost infinite variety of shapes but, as Chil's situation vividly demonstrates, frequently requires a simultaneous formulation of what is being pointed at through language. More generally, this suggests the importance of not focusing analysis exclusively on the properties of individual sign systems, but instead investigating the organization of the ecology of sign systems that have evolved in conjunction with each other within the primordial site for human action: multiple participants using talk to build action while attending to the distinctive properties of a relevant setting. From such a perspective, pointing cannot be explained by studying the body in isolation, but must be seen vis-à-vis shifting backgrounds of settings and situated language practices that are themselves structured by activities and semiotic resources. Pointing thus provides one perspicuous site for investigating the range of resources deployed by human beings to structure their cognition and build meaning and action within the endogenous settings that constitute the social world of a society.

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