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■ ***John B. Haviland***
REED COLLEGE

Anchoring, Iconicity, and Orientation in Guugu Yimithirr Pointing Gestures

Speakers of Guugu Yimithirr at the Hopevale aboriginal community in Queensland use inflected forms of four cardinal direction words in all talk about location and motion. This article compares the pointing gestures in parallel episodes of two tellings of a single story, first to demonstrate that gestures too can be directionally anchored, and then to contrast other gestures that are emancipated from cardinal direction. Different sorts of indexical space and different modes of directional anchoring are posited to account for the contrasting gestural forms.

Guugu Yimithirr

In July 1770, Lt. James Cook and his crew were camped at the mouth of the Endeavour River in what is now northeast Queensland, Australia. Their ship, the original *Endeavour*, after which Cook named the river, had run aground on the Great Barrier Reef, and Cook's crew spent several weeks repairing it.

The people around the mouth of the Endeavour River, then as now, were speakers of a Paman language known as Guugu Yimithirr (GY). The language has a firm place in lexicographic history: Cook learned the GY name for a large marsupial, *gangurru*, and he taught the word to the rest of the world.

There had been several contacts—some hostile and violent—between Cook's crew and members of a band of local aborigines. One seaman, while

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out collecting edible greens, lost his way in the scrub and stumbled on a native camp. Cook wrote, "after he had sit a little while they suffer'd him to go away without offering the least insult, and perceiving that he did not go right for the ship they directed him which way he should go."[1]

Both the directional awareness and the probable use by GY speakers of pointing gestures can be inferred from this fragmentary glimpse of an intercultural encounter. The encounter was to recast the parameters of aboriginal life, in largely disastrous ways, one hundred years later when Europeans returned to the Endeavour River.[2]

In this article I have three related aims. First, I introduce in some detail the system of *cardinal directions* that plays a central part in GY talk about location. Facts of both language structure and use suggest that all spaces (at least insofar as they can be talked about) are cardinally oriented for GY speakers. The background issue, only anecdotally raised here, involves presumed ethnographic and cognitive concomitants of such a system: routes and locales must be oriented in both interactive presentation and internal representation. On the one hand, the GY directional system relates to what is probably a pan-Australian preoccupation with the social history of place, neatly encapsulated in the standard self-characterization: not "that country (or language) belongs to me," but rather, "I belong to it." On the other hand, GY speakers, in order to talk appropriately about scenes, locations, and motion, must attend to, calculate, store, and retrieve directions, a feat illustrated implicitly in what follows, but whose cognitive preconditions are not yet understood.

Second, I link this linguistic subsystem to a gestural practice in which gestures are *directionally oriented*. The discussion reconsiders both the notion of iconicity as often applied to gestures and the nature of a properly grounded anthropology of gesture. In the class of pointing movements I consider, ties of synchrony and meaning between word and gesture depend on interactants' mutual attention to and knowledge of direction and orientation in an unfolding account of past events. Indeed, it is precisely the fact of mutual cointerpretability that binds words and gestures together in a single unit of utterance.

Finally, with reference to two videotaped GY narratives, I consider how oriented gestures, like other indexical expressions, are variably *anchored*. In particular, I examine the intimate but routine connection between *locating* and *referring*, in both word and gesture. Literature on deixis, in a lineage stretching from Bühler (1934) and Jakobson (1957) through Silverstein (1976) to Hanks (1990) and Silverstein (1992), documents the situated, ethnographic complexity of even the (apparently) most primitive acts of reference. GY pointing gestures—which depend on an immediate and interactively shared (oriented) space and at the same time help to create different (also oriented) narrated spaces—offer a similar moral. A descriptive question is thus, *in what space* does a pointing gesture point? The current essay represents an implicit plea for incorporating nonverbal gesture directly into the study of other indexical signs, and takes some preliminary steps toward untangling the social and discursive preconditions for gestural reference.

Locative Expressions in GY

The GY system of nominal inflection includes a LOCative/ALLative case and an ABLative case that can occur on virtually all nominal expressions (although explicit LOC/ALL inflection is often omitted on expressions that can be construed as place names). The meanings involved may range from literal location at, or motion toward/from, a thing or place to more abstract sorts of origin, source, destination, and purpose.

GY discourse about location and motion also makes use of a variety of explicit deictic devices. Most frequent are inflected forms of a pair of demonstrative roots, *yii* 'here, this'[3] and *nhaa* 'there, that', involving a familiar distinction of proximity to an *origo* (reference point) coupled with discursive presupposability. The contrast between arrival at a goal and setting out from an origin encoded in the verbs *gadaa* 'come' and *thadaa* 'go' frequently fixes the point of reference on the speaker, who also provides an unmarked origo for the deictic *nguundu*, usually translated into Hopevale English as 'this side', that is, 'toward here'. GY also has two deictics that typically require gestural supplementation: the presentational *yarra* 'there [look!]', and the demonstrative *yarrba* 'thus'.

The language uses a limited set of nominal roots, which may themselves bear case inflection, to express such object-centered spatial relations as interiority (via the words *wawu* 'inside, center' and *waguurr* 'outside, edge, periphery') and anteriority[4] (*thagaal* 'front', *gurriir* 'back', and *gaarbaarr* 'between, middle'). Although these devices exploit intrinsic asymmetries in reference objects (which may include abstract trajectories as well as physical grounds) for characterizing spatial relations, GY makes no use of locational expressions based on a right/left dichotomy.[5]

Rather than calculating horizontal angles by reference to a body-centered left/right asymmetry, GY selects for special elaboration four roots for *geocentric* direction. The roots denote roughly the same directions as the English words *north, south, east,* and *west*.[6]

The GY terms assume quadrants rather than idealized points on the horizon. Thus, if something is *guwa* 'westward', it lies in the western *quadrant* of the space in which one is centered, rather than, say, on a *vector* running "due" west. The morphology of the GY terms suggests that the four-direction system results from superimposing two separate oppositions, *gungga-/jiiba-* 'north/south' and *naga-/guwa-* 'east/west'. The conceptual dividing line separating the terms of each opposition thus provides a theoretical midline for the transverse quadrants. The GY scheme is also rotated slightly clockwise from the corresponding western compass points, so that while the sun is said to rise *nagaalmun* 'from the east', regardless of the season of the year, so too the town of Cooktown, which lies southeast of Hopevale by a standard compass, is also described as *nagaar* 'to the east'. Figure 1 illustrates these features of the GY terminology.

Hopevale people use these compass direction words heavily in ordinary talk, often to the exclusion of other locational devices. Rather than ask someone to "move back from the table," one might say *guwagu-manaayi* 'move a bit to the west'. If someone asks, "Where are you going?" one

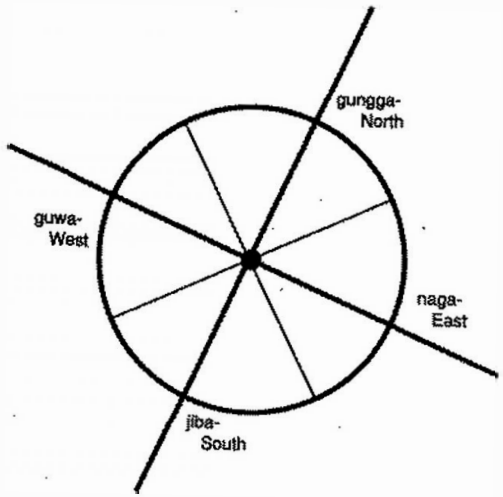


Figure 1
Guugu Yimithirr directional roots.

usually replies not simply *store-wi* '[I'm going] to the store' but, as appropriate, *guwa store-wi* 'west to the store' or perhaps just, in context, *guwaar* 'west [to a goal]'. When Hopevale people talk to me about America, they ordinarily refer to it simply as *gunggaalu* '[a long way] northwards'. Given any two points, an origo and a goal, it is always possible to specify a cardinal direction from one to the other. But to use the insistent GY system appropriately, you have to keep either your wits about you or a compass in your pocket.

Such a system of directions appears to involve strikingly different principles for calculating horizontal position and motion from familiar systems based on the anatomies of reference objects, including speakers and hearers themselves. Rather than calculating location relative to inherent asymmetries in such local objects, the GY system apparently takes as its primitives global geocentric coordinates, independent of specific local terrain, and based instead on absolute horizontal angles.[7] Previous work on GY (see Haviland 1979c; Haviland 1986; Levinson 1992)—and indeed, GY speakers themselves—emphasize the conceptual differences between a cardinal direction system so conceived and, for example, the English locational system that prefers to exploit a left/right dichotomy, at least for microspace.

The Morphology of Directional Roots

Elaborate morphology on the four cardinal direction roots encodes a vector of direction, from some established origo or point of reference,

combined with various sorts of perspective—in the first instance, locational, but often extended to perspective within a particular universe of discourse.[8] The morphology goes well beyond that available for ordinary GY nominals.

The ordinary system of locational noun cases is hyper-elaborated with directional roots. For example, there are three distinct LOC/ALL forms and four different ABL forms. I will illustrate with the root *naga* 'east'.

1. LOCative/ALLative forms
   naga [0-form, 'east from origo']
   naga-ar [R-form, 'to a point east of origo']
   naga-alu [L-form, 'east from origo, through a point']

2. ABLative forms
   naga-nun [N-form, 'from a given point east toward origo']
   naga-nu-nganh [NABL-form, 'out of point east of origo']
   naga-almun [M-form, 'from easterly direction to origo']
   naga-almu-nganh [MABL-form, 'origin east of origo']

GY speakers who venture an opinion on the matter insist that the differences between these groups of forms involve *relative distance* from a reference point, moving in both of the sets shown from relatively close to relatively far. This folk metasemantic characterization is only a first approximation to an analysis adequate to the facts of usage.

The 0-form is unmarked; it suggests motion or position in a certain quadrant, an unmarked vector originating in the origo. It can appropriately be used to denote *setting out* in some direction or an otherwise unmarked vector from a given starting point.

3. bp2a[9]
   nyundu gathaa baawa-la *naga*
   2SgNom bushfire burn-IMP *east=0*
   You burn the grass to the east (from here).

The R-form, by contrast, presupposes an *endpoint*, *goal*, or *focus* in the specified direction: heading for, thinking of, or getting to some specific location.

4. boat2
   gad-ii *nagaar* Wuuybu-ga-mi
   come-IMP *east=R* Woibo-POSS-LOC
   Come (let's go together) to Woibo's place in the east.

Finally, the L-form suggests that the directional vector *passes through* some intermediate point.

5. t828a
   Wakooka *nagaalu* buurray-ay thambarr-in badiimbarr
   east=L water-ALL throw-PAST down
   Way to the east of Wakooka they threw it down into the water.

Because the intermediate point may be a dip, rise, ridge, or something that renders the destination inaccessible, the L-form often implicates distance or remoteness (as in example 5 where the speaker is talking about a waterhole several hundred kilometers to the east from where he speaks), but it need not. In example 6, the speaker recalls hunting *beyond* a small creek that was close to the reference point, a former camp. His choice of the L-form *nagaalu* encodes just this geography.

6. t828a
nha-mu-nganh naga thadaara-y birri *nagaalu* bitha-way[10]
there-CAT-ABL east=0 go+REDUP-PAST river *east=L* small-ALL
We would go from there eastwards, past that little creek to the east.

The ABL forms also record differences in perspectival presupposition. The N-form implies a definite location in the indicated direction from which motion or position is to be calculated. It is like the R-form in reverse.

7. milbi14
waarigan guthiirra nhin.ga-y, gada-y nyulu *naganun*
moon two stay-PAST come-PAST 3SgNom *east=N*
He stayed [in that place] for two months, and then came from that point in the east.

The M-form presupposes an *endpoint* (at the origo) that motion from the indicated direction approaches; it is thus the inverse of the 0-form. In example 8, a missionary is instructing someone to bring a young boy from an aboriginal camp to the mission station where he is.

8. bp4a
nhangu diiga-la *nagaalmun*
3SgAcc send-IMP *east=M*
Send him from the east [to me, to here].

Both N- and M-forms can be further suffixed with the ordinary ABL suffix *-nganh* to describe origin in some quadrant where something comes from or originates. Any motion implied may be understood as not necessarily proceeding toward the origo.

9. t843b
ngathu biiba galmba ngamu *guwalmunganh*
1SgDat father also mother *west=MABL*
My father's mother also came from the west.

There are thus several variables that a GY speaker must keep in mind to use such forms properly. First from a given origo (1), the appropriate directional quadrant (2) must be assigned. An orientation (3) toward or from the indicated direction governs the selection of LOC/ALL versus ABL forms. Finally, a presupposed focus point (4) lying in the appropriate quadrant may also be involved. Given this machinery, we can diagram the forms described as in Figure 2, where the small circle represents the

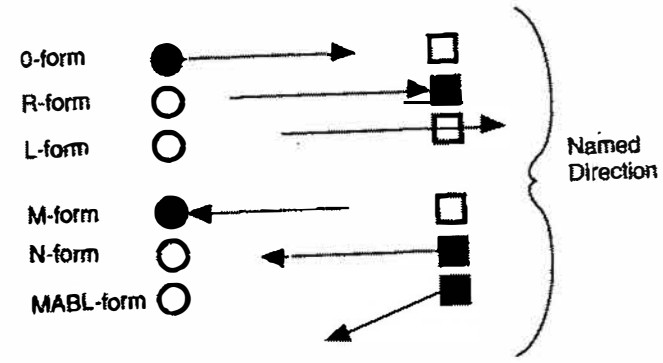


Figure 2
LOC/ALL and ABL forms.

origo, the small square a focus point, and the arrow the orientation. The relative positions of the directional arrows demonstrate the iconic plausibility of the metaphor of relative distance in standard folk glosses.

This is not the end of the morphology. There are also reduplicated forms of these roots, along with two further forms usually translated into English with the word *side*. These forms conceptualize the denoted quadrant of the space in question as bisected by a transverse one-dimensional (i.e., relatively long) entity.

10. Reduplicated forms
naga=naga [REDUP-form, 'a bit east']
naga=na [HREDUP-form, 'on the east side']

11. "Side" forms
naga-n.garr [G-form, 'on the east side or face']
naga-alnggurr (*or* naga-alnggarr)
[LG-form, 'along the east side']

Finally, inflected forms of cardinal direction roots can, like many other GY nominal forms, combine with further inflection, notably the emphatic suffixes *-:gu*,[11] *-:garra*, and *-buthu*, the verbalizers *-mal* or *-mana-aya*, and even further case suffixes, including purposive and ergative. The conventional use of the emphatic *-:gu* to mean "still (of such-and-such a character or condition)" and the verbalized forms are frequent with cardinal direction roots.

12. t842a
ngayu ngamu *naga-aygu* dubi
1SgNom mother *east-EMPH* leave+PAST
I left my mother still in the east.

13. hv860718
naga=naga mana-ayi
EAST+REDUP INCHO-IMP
Shift a bit to the east!

I have laid out the morphology in some detail in order to make two general points. First, notice that characterizing the GY directional system as "absolute" (Levinson 1992) is at best misleading, because the relational nature of the roots is inherent not only in their basic meanings ("quadrant X from a given reference point") but also in all of their morphological guises, where the relational elements of *focus* and *orientation* are essential.

The second and more important observation is the essentially deictic nature of the GY system, because cardinal terms depend on the same sort of contextual fixing as other indexicals to provide the reference (and perhaps focus) points demanded by their semantics. The foremost anchor is the origo given by the speech situation, which is in turn susceptible to characteristic transpositions (see Haviland, in press)—that is, the anchor can be shifted to, for example, narrated reference points, as will shortly be seen.

One sort of evidence for this claim is distributional. Tokens of directional roots in discourse are frequently linked with the explicit deictic devices I have described. For example, in a 110,000-word corpus of transcriptions that includes various sorts of GY conversation and narrative, of some 220 occurrences of the presentational *yarra* 'there [look!]', 55 percent are followed directly by a cardinal direction form.[12]

14. t9208a1
nyulu yarra naga nhaamaalma
3SgNom yonder east=0 look+REDUP+NONP
He is looking that way east (describing a photo of a group of toy men).

More striking still, nearly 60 percent of all cardinal direction tokens[13] cooccur with inflected forms of such explicit deictic elements as *yii* 'here, this', *nhaa* 'there, that', *gadaa* 'come', and *thadaa* 'go'. This high proportion suggests that cardinal directions are anchored in the same ways as other deictics.

The morphological possibilities endow the cardinal direction roots with considerable expressive potential, allowing speakers to encode location, distance, accessibility, presupposability, definiteness, and perspective all at once. The directional terms, centrally, allow GY speakers to trace complex routes through space, tracking protagonists by their location within a spatial representation largely constructed through use of the terms themselves. It is to the spatial representation underlying one extended GY narrative that I now turn.

How the Boat Sank

Hopevale is a Lutheran aboriginal community near Cooktown, descended from a mission established by Bavarian missionaries from Neuendettelsau, in the aftermath of the Palmer River goldrush in 1886. Most of the residents at Hopevale are native speakers of GY and bilingual in English.

In July 1980, I filmed one of Hopevale's expert storytellers retelling—to men who had heard the story many times before—an event of some significance in mission history. The storyteller, the late JB, and another older man had been on a trip with a mission boat delivering clothing, wood, and provisions from the main station at Cape Bedford to an outstation at the McIvor River. Caught in a storm, they were forced to abandon the capsized boat at sea and swim more than five kilometers to shore. They then walked several hours back to Cape Bedford and knocked exhausted on the missionary's door. The missionary's first thought, however, was for the boat; after directing that they be fed, he sent them straight back to try to recover it. The story has a pointed and oft-repeated moral about the missionary's character and priorities.

Stephen Levinson, doing research at Hopevale with Penelope Brown a couple of years later, made another videotape of JB in September 1982, during which JB told the story again. This second version provides crucial comparative material, and my analysis here juxtaposes the two narratives in both word and gesture.

Pointing, Reference, and Orientation

Language evolves in the context of face-to-face interlocutors who share a place and a moment. Both word and gesture index this shared spatiotemporal realm. Typically, in GY speech, a referring expression will be accompanied by *both* a directional or deictic determiner *and* a pointing gesture; both, somewhat redundantly, help pick out or otherwise specify the intended referent. Moreover, as even a quick look at JB's performance will show, many of JB's gestures, whether they can said to be instances of pointing or not, are *oriented:* that is, when juxtaposed against the words they accompany, they appear to be performed in a deliberate and significant direction. I focus now on such oriented gestures in JB's two storytelling sessions, and in particular on their interaction with the system of directionals just described.

The organization of gesture is inextricably related to linguistic structure. At the level of functional interdependence, deictic gestures both substitute for and supplement spoken deictics (see Marslen-Wilson et al. 1982); Levelt et al. 1985). Moreover, early observations (e.g., Birdwhistle 1952, 1963) as well as the robust findings of Kendon (1980, 1988) or Schegloff (1984) about the strict synchronicity of speech and its illustrating gestures argue for an interdependence of language and speech at a more conceptual level, a position that McNeill (1985, 1992) has elevated to an entire psycholinguistic program. The possibility of formal/functional links between gestures and the meanings they appear to encode (for example, Calbris 1990; Haviland 1991) calls into question the dichotomous nature of "Kendon's continuum," from gesticulation to sign language (Kendon 1980, 1990; McNeill 1985).

Several distinct sorts of gesture may be observed in normal speech, and typologies abound. If we eliminate from consideration the most highly

conventionalized gestural signs, called "emblems" by Ekman (1976) or "symbolic gestures" by Morris et al. (1979),[14] there remain those bodily movements least conventionalized and most bound to simultaneous verbalization—what Kendon has called "gesticulation." McNeill and his associates (Cassell and McNeill 1991; McNeill 1985; McNeill and Levy 1982; McNeill, Levy, and Pedelty 1990) have developed an influential classificatory scheme applied to such gesticulation to distinguish between iconic gestures, metaphoric gestures, beats, and deictic gestures.

Iconic gestures, on this account, more or less transparently depict objects, events, and aspects of events in the narrative, often in ways that are not spoken (perhaps even in ways that could not be spoken easily). It is often supposed that gesture is particularly suited to representing, in its four-dimensional analogue channel, aspects of shape, form, space, and position that are not often lexically (and thus digitally) encoded; or that it can depict actions and motion that unfold concurrently in time in a way that bypasses the essential linearity of speech. JB, for example, uses gestures to illustrate the effort of swimming from a sinking ship, to show how the boat capsized, and to depict the size and motion of the waves. Iconic gestures also necessarily encode different sorts of perspective (what Cassell and McNeill call "viewpoint"), now portraying an event as it might be seen by an observer, now switching to the point of view of a protagonist.

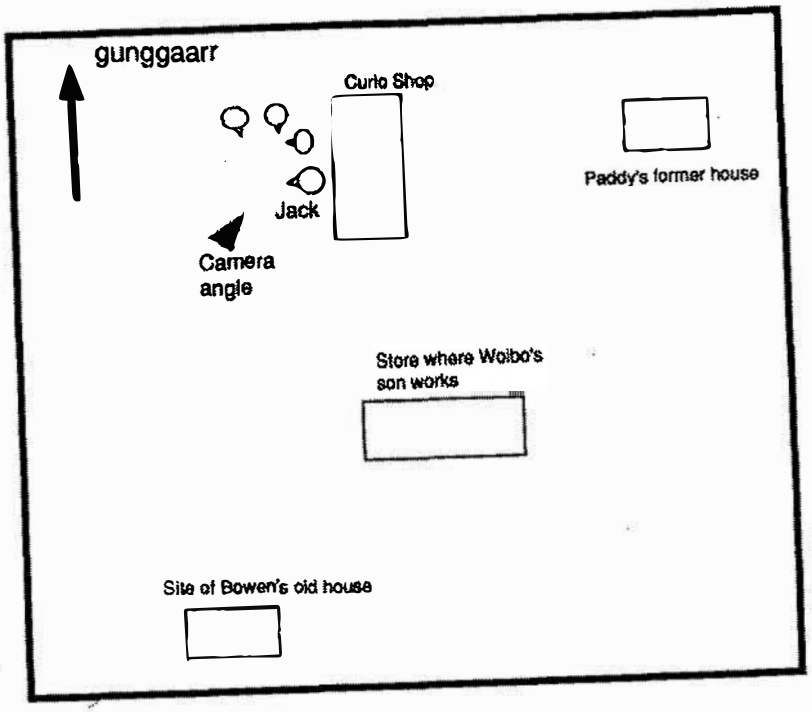
For McNeill, metaphoric gestures are a special sort of iconic gesture that, instead of directly illustrating the import of a speaker's words, depict the vehicle of a metaphor (for example, a "balancing" or "weighing" gesture to accompany speech about making a decision or considering options). Beats are "formless" gestures, often synchronized with the rhythmic structure of utterances. These and other sorts of movement may provide a vehicle for characteristic narrative metacomment, punctuating speech in much the same way that body movements or shifts of gaze often do.[15]

McNeill's deictic gestures are gestures that "point." Such gestures cannot be iconic because they do not in any way resemble their referents. They must instead be understood to refer as Peircean indices. Indeed, they are the canonical (and for many theorists the ontologically primeval) indexical expressions, despite well-known doubts expressed by philosophers from Wittgenstein to Quine (see Haviland 1991).

GY speakers point a good deal, and they are scrupulous about keeping their points correctly oriented. If one is talking about going to the beach and the beach is east, one points east. At Hopevale, when one draws a map with one's toe in the dust, one keeps north *north* and does not just say, "Let's imagine that this way is north." All locations, even narrated ones, have directions attached, and one maintains cardinal orientation even when one's point of reference moves away from the immediate here and now.

In the 1980 film, JB and his interlocutors are sitting on a bench in front of the Curio Shop at Hopevale. JB himself is facing west (*guwa*); north is thus to his right, and south to his left. Map 1 shows the position of the interlocutors in a stylized diagram of this part of the modern Hopevale Mission.

To indicate the direction he had to swim from boat to beach, JB gestures slightly to his left—southwest, or *jibaarr*. But the point to which they were



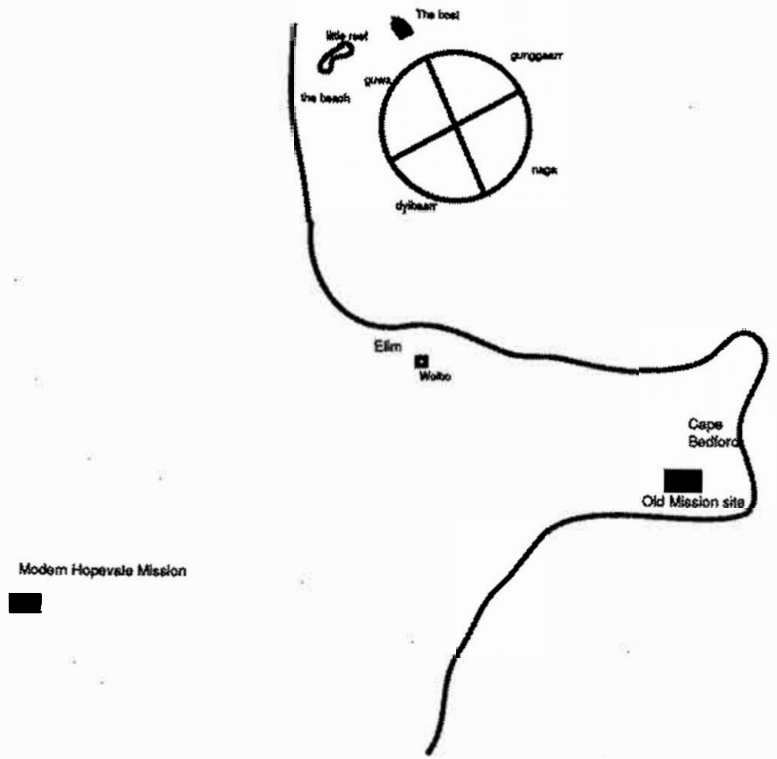
Map 1
Local space, 1980.

swimming on this occasion actually lies well north (and slightly east) of where they are sitting at modern Hopevale. These relative positions can be seen on Map 2.

Thus, JB's precisely oriented gestures cannot always be understood by reference to the immediate moment and place of speech. They must instead be transposed to a discursively established origo. When he gestures south as he talks, he may be understood to be referring to a point south not from where he sits at modern Hopevale, but from the boat he is describing. How are these perspectival switches achieved and rendered interpretable?

In Levinson's 1982 film, JB and his interlocutor RH are seated side by side, facing north (see Map 3). In such circumstances, if JB talks about swimming south to the beach, in order to be oriented according to the principles just described, his gestures must point behind him, over his shoulder.

Most of the gestures with which I am concerned in these two narratives populate a "space" constituted from the universe of discourse. Non-pointing gestures can also be oriented in the sense I intend. Let's begin with an example that involves no explicit pointing. Consider the way JB describes how the boat on which he was sailing capsized. As it was returning to Cape



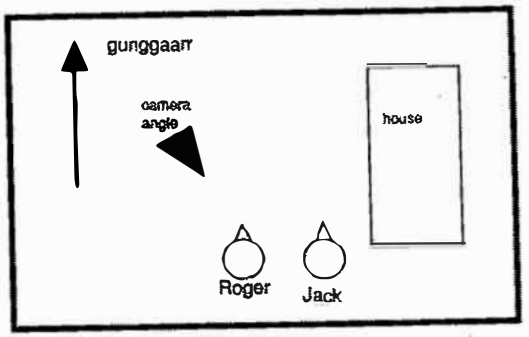
Map 2
Hopevale, Cape Bedford, Elim, and the boat (not drawn to scale).

Bedford (a point *jibarra,* to the south), the boat was caught in a kind of whirlpool that, combined with the winds, flipped it over, leaving its sail in the water and its keel upwards. In JB's first telling, here is what he says:

15. 21 j; dagu gulnguy nhayun .. miidaarr-in yarrba gurra-y
thing boat that+ABS lift-PAST this=way say-PAST
Well, the boat was lifted up; it went like this.

As he says *yarrba* 'this way', JB brings both hands up from his lap, out in front of his face, and down again in a kind of rolling motion. Because of the direction he is facing, this motion seems to depict the boat as flipping over from east to west. (See Figure 3, which shows how JB and his interlocutors are seated.) JB's hands finish extended in front of him to the west.

In the second telling, two years later, JB again illustrates with an iconic gesture how the boat flipped over. Here are his words:



Map 3
Local space, 1982.

16. 17 j; miidaarr-in yarrba th—
lift-PAST this=way
It lifted it up like that—

18 thambarr-in
throw-PAST
—and threw it.

Once again JB gestures, but this time he uses his body quite differently: he lifts his left arm while dropping his right; then he lifts the right arm with an outward circling movement, at the same time circling down and in with the left arm. The effect is to show the boat rolling over (see Figure 4), once again flipping *from east* (now at JB's right) *to west* (his left).

Because JB uses no explicit linguistic directional expressions, one cannot be sure that this apparent directional parallel is anything more than coin-

Figure 3
"The boat was lifted this way."

Figure 4
"It lifted it up like that, and threw it."

cidence. However, during the season in which the accident took place, storm winds blow strongly from the southeast, making it likely that the boat would have rolled over from east to west. Moreover, the orientational precision of a large class of JB's other gestures—to which I shortly turn—suggests that he has adjusted his motions so as to keep them geographically oriented and appropriately anchored in order to portray the direction the boat actually did flip.

In Figure 5, I try to capture the parallel directional orientation of JB's gestures in the two different tellings, the 1980 version on the left and the 1982 version on the right. In both cases, JB first performs a "lifting up" motion in the space in front of his body as he sits. He is thus gesturing in what seems an *un*anchored fashion, where directions seem to be irrelevant. I draw such *free* gestures in the diagrams within a circle that represents the interactional space given by the speech context itself. When JB shows by moving his arms how the boat flips over, however, he anchors his gesture with respect to cardinal directions. I represent such anchored gestures by drawing them within a rectangular box (one with edges where, by convention, north is at the top) that represents what will be dubbed *anchored narrated space*.

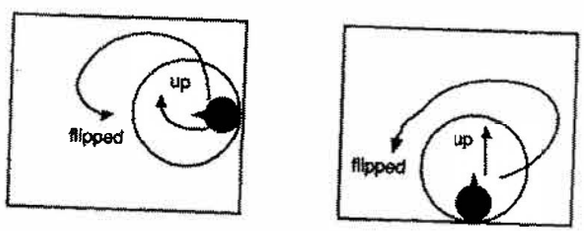


Figure 5
"The boat was lifted."

It's Not Polite to Point

Let me return for a moment to the design features of gesture, as opposed to spoken verbalization. Levinson (1987) suggests that aspects of GY syntax render GY discourse referentially ambiguous; gesture can have a special remedial role here vis à vis syntax. Levinson remarks, "It is hardly surprising that a language with zero anaphora and no verb agreement would find an ancillary channel of gestural information very useful, displacement into the non-verbal channel itself counting as minimization." Presumably, the "non-verbal" character of the channel makes gesture count, for Levinson, as "minimal" (or, in some sense, reduced or displaced) communication. The chief property of gesture here is, I think, its silence, a feature with a special ethnographic importance in aboriginal society.

According to familiar Gricean maxims (Grice 1975), one ought only to bother to point, in context, for some identifiable reason (maxim of relevance); the entity at which one points must be identifiable (maxims of quantity and perhaps quality), but there must be some reason for pointing as opposed to referring by some other means (maxim of manner). Thus, pointing gestures can have interactional significance deriving from the fact that they are silent, and hence selectively covert, replacements for spoken referring expressions. This is the basis for Sherzer's observation (Sherzer 1972) that the Cuna *pointed lip gesture* routinely is taken to implicate mocking, joking, and criticism.[16] Otherwise, why point? (And why with the *lips*?) Why not speak aloud?

Silence can have a different valence. Australian aborigines often use speech prohibitions to mark especially polite behavior, or respectful interactions. The well-known reduced vocabularies of mother-in-law languages (Dixon 1971; Haviland 1979a, 1979b) are a case in point. A GY man is not able to speak to his mother-in-law at all, and typically uses special respectful vocabulary with his brother-in-law and father-in-law, from whom he has to maintain a deferential and respectful distance. Throughout aboriginal Australia, it is ordinarily improper to utter the names of recently deceased people, and sometimes all words that sound like such names are also forbidden.[17] The gestural sign language of the Warlpiri speakers at Yuendumu is an example of auxiliary sign languages "that have been especially elaborated by women among the peoples of the southern and central desert regions of Australia, where it is the custom for a woman to forego the use of speech when bereaved, sometimes for very long periods" (Kendon 1984:556; and see Kendon 1988). In such a context, the silence of gesture can take on added expressive and social significance.

Deictic Spaces

We must consider one final technical matter about where pointing takes place. Bellugi and Klima (1982:301) describe some of the syntactic and semantic functions of pointing in American Sign Language (ASL) as follows:

If a referent (third person) is actually present in the discourse context between signer and addressee, specific indexical reference is made by pointing to that referent. But for non-present referents that are introduced by the speaker into the discourse context only "verbally," there is another system of indexing. This consists of introducing a nominal and setting up a point in space associated with it; pointing to that specific locus later in the discourse clearly "refers back" to that nominal, even after many intervening signs.

Note that signers can use distinct horizontal planes to introduce nominals of different sorts (for example, generics go on a higher plane than specific nominals, as do "indeterminate references"). Signers also use different planes for contrasting events. Indeed, it is in terms of this syntax that verbs are marked for agreement, that anaphoric devices are manipulated, and so on. Although Bellugi and Klima (1982) still refer to "simple pointing" and its "putative iconicity,"[18] they make it clear that only the structured practice of pointing in ASL allows such formatives to refer at all.

To complicate matters further, ASL speakers can shift the reference of pointing signs by making a wholesale change in the space within which pointing pronouns refer. Such a shift of body position amounts to a metaphorical device for altering the perspective of the speech event: it corresponds, in kinesic idiom, to establishing a deictic origo different from that of the speech event through discourse, or to the setting of scene and protagonist that speakers accomplish through metacommentary and other framing devices.

Anchoring

From the evidence of spoken language, it is reasonable to suppose that all spaces, actual or imagined, in GY are inherently oriented with respect to the cardinal directions[19]; that is, cardinal directional words are rampant in most talk, and directions seem to be *potentially* relevant to any space. As I have mentioned, in the two filmed narrations of the shipwreck story, the speaker is sitting facing in different directions. In the 1980 version he faces west, whereas in the 1982 version he faces north. Juxtaposing the two films thus allows us, by time-honored principles of distribution and contrast, to distinguish (at least provisionally) *oriented* gestures from those that are decoupled from cardinal directions. We are aided in this project by the explicit spoken evidence of directional anchoring provided by the GY cardinal direction roots and other explicitly deictic denotational elements.

From the very beginning of his story, JB orients the positions of the protagonists. I have suggested that he shows gesturally how the boat flipped over in the water; he is, predictably, verbally precise as well. In the 1980 narrative, JB describes how he jumps into the water. His "jumping down" gesture and his later words place him on the west side of the submerged boat, with his companion still standing on the stern. JB locates the stern toward the east, as the boat drifts with the currents.

17.[20] 2: o..... a... b.....h m
9 Ngayu bada ganbarr-in (2.0)
1sNOM down jump-PAST
I jumped down.
2: R: "loose G", from knee up above head at a, pointing down in front (W) at b; gaze to point of R finger, slightly in advance of the pointing motion.

10 buga yarrba *naga* thada-y yii:[21]
stern this=way *east=0* go-PAST here
The stern was moving this way, east.

Concerned that the other, older man might try to grab him as they swim, JB tries to makes sure that they maintain a certain distance from each other; thus he tells the other man to jump in on the opposite side of the boat. Their relative positions are again phrased in terms of east and west.

18. ..... !..... p.....
38 ngayu gurra-y nyundu yarrba ganbarr-a *nagaalnggurr*
1sNOM say-PAST 2sNOM this=way jump-IMP *east=G*
I said, "You jump in this way along the east side."
L: "B spread," palm outwards and backhand sweep S and E, with arm extended back from shoulder (E); gaze follows; hand back to waist at rest.

.....!.....
40 (.6) ngayu *guwaalnggurr* bira (1.8)
1sNOM *west=G* indeed
"And I'll be just along the west side."
R: in "bent L," palm to center, thumb up, up from lap, dip down in front with head dip at !, back to rest between legs.

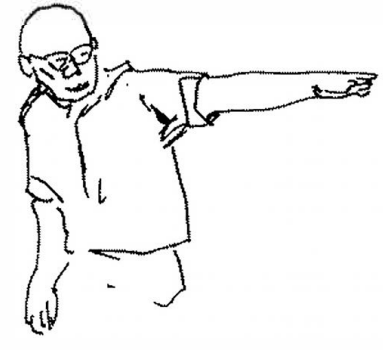


Figure 6
"You jump in on the east side."

Figure 7
"I'll be on the west side."

Figures 6 and 7 illustrate JB's gestures, first when he points to the east (behind him) while saying *yarrba* 'thus', at line 38 (Figure 6), and then when he points forward and down as he says *guwaalnggurr* 'along the west side' in line 40 (Figure 7).

In the 1982 version, JB again places the other man on the east. The delicate dance of gestures here is especially interesting.

```
19.                  o ..... !.. .....
   69 nyundu  yarrba    naga=na
      2sNOM   this=way  east=SEMIREDUP
      "You (be) there on the east side."
         R: loose "G" with index backhand out from lap N; slight move E at !,
            back to rest in lap.

            1:.....a..b...        2:... ... !.....
   70 well yubaal   maariilil          gaari yuba-aygu maariilil
         2duNOM swim+RED+NONP not  near-EMPH swim+RED+NONP
      Well, when two of you swim, you can't swim close—
         1: both: "4" up, palm in to front, L down and R up, in "5" at (a) and
            (b).
         2: R up, "5," palm slightly down, left right gesture, "close"?

            3:.....!.....  4:.....
   71 =nyulu  nhayun  garrba-ya  nhinaan
      3sNOM   that+ABS grab-CAUT 2sACC
      —(because) that one might grab you.
         3: R: "L3" pointing W (or to RH?) at !.
         4: L: "C" or "A" palm down, loose fingers touching, bunched,
            grasping, NW outwards.
```

JB verbally represents only the position of the other man as *nagana* 'on the east side'. At the same time, he points east (Figure 8). Here JB's own position in the west during the narrated events can be only tentatively inferred: first, in opposition to the other man's position in the east, and second, by the westerly orientation of the grasping gesture as he says "he

Figure 8
"You (be) there on the east side."

might grab you" in line 71 (Figure 9). JB uses the position of his copresent interlocutor RH (the 2nd person singular *nhinaan* of line 71), who is sitting directly to the west, as he illustrates the other man's grasping gesture.[22]

I have diagrammed the oriented gestures in these two passages in Figure 10. Once again, JB's gestures and words place the two protagonists clearly in the appropriate relative cardinal relationship, with JB to the west and his older companion to the east.

Consider next how JB describes the time of day these events were taking place. In the 1980 version, he wants his interlocutors to know how late it was.

Figure 9
"He might grab you."

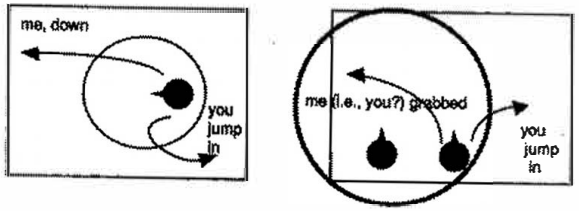


Figure 10
"Keep away!"

20. a . . . . . b . . . . . c . . . . . >
250 we bin see that ngalan go down[23]
sun
We saw the sun go down.
L: at (a) up in "C" form; out W at (b), and down at (c).

His gesture, as can be seen in Figure 11, graphically displays the sun's setting *in the west*, the same direction he happens to be facing as he tells the story.

In the 1982 narration, RH asks what the time of day was. JB answers as follows:

21. . . . . a . . . . . b . . . . . .
118 j; ngalan just yalmba-wi *guwaar* duuga-athi
sun sandhill-LOC *west=R* enter-PAST
The sun was just going in west, over the sandhills.
L: "B" from front out W at (a), flat, palm down, eyes sighting along arm, held; retracted at (b) flat, back to right elbow.

Figure 11
"Sundown."

Because he is here facing north, JB must now turn to his left to trace the correct orientation of the sun as it drops behind the imaginary sandhills he would have been able to see from the boat toward the west. As he completes his gesture, he adds verbally an explicit R-form *guwaar* 'to [a point] west' that records the sun's metaphorical movement to the western sandhills behind the beach (Figure 12).

Another explicit verbal characterization of direction comes later in the story. The two men finally manage to reach the beach. The older man, a devout Lutheran, immediately kneels down to pray. Unconcerned, JB looks back toward the boat. He sees the fin of a large shark cutting through the water right where they had been swimming. He uses the 0-form *gunggaarr* at lines 127 and 133 to indicate unmarked direction from where he stood at the time, looking north out to sea.

22. . . . . ! . . . . . >
127 j; ngayu yarrba *gunggaarr* nhaathi
1sNOM this=way *north=0* see+PAST
I looked that way toward the north.
Body squares to N, head and gaze directed N and held.

>. . . . . .
128 gulnguy nhaathi-nhu nhaathi .
boat see-PURP see+PAST
..in order to see the boat, see?
Held as in line 127.

. . . . . ! . . . . >
129 buulga shark
giant
(There was) a huge shark—

Figure 12
"Over the sandhills."

```
                >.....................................................>
130   gagan that high wanggaar yuulili                              ya
      fin            up             stand+REDUP+NONP PT
      —fin standing that high!
        R: sweeps up, palm downwards, in "C," out to high "5" in front;
           L in "5" below, opposing, and held throughout.

                >.....  2:.....
132 j; three feet of . gagan-gu  wanggaar .
                       fin-EMPH up
      (There were) three feet of fin standing up
        2: R: turns inward in "bent 5"; to face speaker, drops rapidly to
              mid 0, pointing in "C," straight up and down in front
              of face in "B."

                3:.....                          4:.....
133   thumbuurrgu gunggaarr thadaara-y      ngali-igu      gada-y
      straight    north=0   go+REDUP-PAST 1dNOM-EMP come-PAST
      —going straight north right where we had come.
        3: R: palm turned out in "5" pointed out, then high to N.
        4: R into "G" turned down and inwards to point from N to
           S, and down, then to rest.
```

JB's gestures are carefully oriented. He shifts his body to portray looking north at lines 127–128, just as he would have looked north from the beach to see the boat. He traces with his hand the northerly trajectory of the shark

Figure 13
"Look north."

(at line 133, segment 3, see Figure 13) and also the north-south trajectory along which they swam (segment 4).

In JB's 1982 rendition, he describes the same scene. Arriving at the beach, he turns to look back north to the boat, as the other man prayed. Again he reports spotting the shark. This time both JB and his interlocutor describe its path north. RH uses the 0-form *gunggaarr* at line 148 to suggest that the shark was heading 'northward from the perspective of the beach'. JB uses the R-form *gunggarra* at line 149 to describe how the shark was heading 'toward the boat'.

```
23                    .....!.....
148 r; yarrba     gala    gunggaarr thada-y
       this=way EMPH north=0    go-PAST
       It was going right along that way, to the north.
         RH: L: up "B" with palm inward, up toward N, back to rest.

                          .....a.....b.....
149 j; gunggarra gulnguy gulnguy wuguurrgurr      ngaala
       north=R   boat     boat     follow+REDUP+NONP odor
       It was following the scent of the boat, to the north.
         L: up in "B spread" to N, raised and palm twisted back and forth
            at (a) and (b), back to waist.

150   =wuguurrgurr
       follow+REDUP+NONP
       —following the scent.
```

Figure 14 shows how both men gesture at this point. In the earlier telling JB, who was facing west, had to turn his body hard to the right to point to an imaginary boat bobbing on the northern horizon. Here both men already

Figure 14
"Following the scent."

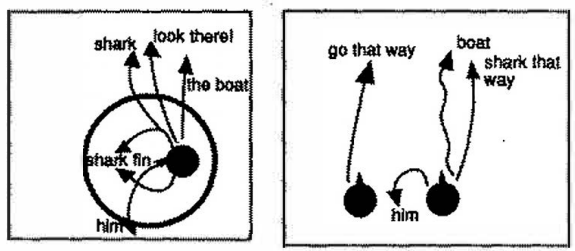


Figure 15
"Look at the shark."

face north, and their gestures point out in front (to encode *north*) and up (apparently to suggest motion and distance by an iconic appeal to movement *up* toward the horizon in the visual field—see Haviland [1991]).

Figure 15 shows the uses of oriented space in these two scenes. In both cases, two aspects of the scene are correctly oriented, in word and gesture. JB indicates where the older man was kneeling in relation to where he himself was standing, looking north. He also sights north toward boat and shark.

How do the oriented gestures in these scenes work? How is their directional import calculable? The immediate *interactional space* that JB and his GY-speaking interlocutors inhabit (the perspective of which is defined by the context of their interaction) clearly comes equipped with cardinal directions conceptually attached. Entities in the immediate space can thus be pointed to, indexically signified, with both gestures and other directional and deictic terms. *Narrated spaces* (i.e., narrated events seen from some narrated perspective) are laminated over the immediate interactional space, importing that space's cardinal directions but substituting for the here-and-now a narratable there-and-then. Narrated entities can in turn be denoted by indexical devices, including "pointing" gestures, whose referents must be iconically mapped from the one space onto the other. (In the case of the sunset gestures, perhaps the two spaces are collapsed into one: the sun set then, there, just as it does now, here: in the west.[24]) Such mapping produces both vividness[25] and interlocutor involvement, as in the leakage between narrated and narrating spaces when JB invites his copresent interlocutor RH to imagine himself a protagonist, being narratively grabbed.

The examples presented so far adopt a perspective that maintains directional integrity, as calibrated against the immediate speech context. In GY discourse, although the point of reference may shift, the orientations are, at least by default, constant. Describing the sinking ship north of Elim, when I point south I mean south *from there*. Directional precision gives the narrator additional resources for framing commentary or dramatizing a story: if I shift my body or look to the north when acting out a narrated conversation, I make clear that I mean to be talking to the person who was, in the story, to my north. Moreover, a simple shift of perspective can alter the value of the directional gesture.[26]

Figure 16
"Three feet of fin."

"Free" Gestures and Interactional Space

As the circle in the left part of Figure 15 indicates, JB performs some gestures in ways that seem independent of the orientational frame of cardinal directions. For example, he shows the shark fin not to the north, but straight in front of his body as he sits. (See Figure 16.)

From the point of view of the interlocutors in a speech situation, a referring gesture may be oriented in several ways. Pointing gestures, like other indexical signs, may sit at various points along the continuum from what, following Silverstein (1976), have come to be called "relatively presupposing" to "relatively creative" indices.

Where a present and directly perceivable referent is the target of a pointing gesture, it is relatively presupposable: its presence and location/direction are already taken for granted, and the pointing gesture merely inserts the referent into the current universe of discourse. "I was a young man then," says JB, pointing to his own chest as with ASL first-person pronouns. This perspective defines a *locally anchored space:* the immediate environs of the speech event, within which deixis presupposes the locus of (probably observable) targets—speech participants, local objects, and geographical features—and also cardinal directions calculated from the current origo.

Other pointing gestures, however, directed toward nonpresent objects, are relatively creative. The gestures themselves help create their referents and entail their existence for current discursive purposes. The area within which a speaker locates absent referents creatively and refers to them in subsequent gestures is largely defined by the orientation of the speaker's body, a kind of hemisphere of immediate access for hands and gaze. The space has an interactional character also, being conjointly available to interlocutors for referential pointing. Although the physical surround re-

mains the same as in the previous case, we may thus distinguish a conceptually "free" or unanchored interactional space.

JB's gesture (Figure 16) as he demonstrates the height of the shark fin is not oriented "correctly" to the north. He instead seems to sketch the fin directly in front of him, literally incorporating it into the interactional space he shares with his interlocutors: inviting them to see it, too, as he sees it in the arbitrarily partitioned area that all face. "The fin was *that* high, straight up and down *this* way." Demonstrating the shark fin, JB gestures in a space free of cardinal orientation, and directly perceived by his interlocutors as, in the narrated context, he perceived it himself. The local interactive space of JB's shark fin performance is shown as a dark circle in Figure 15: a circle because the space is directionally free, and dark because it is local, not narratively transposed.

There is in GY narrative gesture a constant switching between anchored space and unanchored interactional space. Such switches are partly signalled by changes of footing (Goffman 1979) within the overall performance. JB's stories give us a useful set of clues about when interactive space is appropriate. JB performs his gestures in this unanchored space when he switches from strict narration to scene-setting, framing, or narrative metacommentary, and also while engaged in direct interaction with his interlocutors, talking to and gesturing at them. Notably, when the narrative recounts scenes of interaction, JB may also quote "free" gestures as part of what he narrates.

A particularly clear example of the use of *narrated interactional space* to portray interaction comes later in the story, after JB has reached the dramatic climax of the tale. The two shipwrecked men have swum to shore. They walk a few miles down the beach, and are given food and some clothes by a relative. Then they make the long trek back to Cape Bedford, where they knock on the missionary's door in the middle of the night.

"Who is it?" asks Missionary Schwarz.
"The two of us," they reply.
"And the boat?"
"The boat sank."

The angry missionary utters a racist epithet and tells the two exhausted men that they should have stayed on the boat. He summons a helper and, in JB's 1980 version, issues the following instructions:

24. 1:.....
236 them two silly coons there
1: R: "G" out in front W, head dips down.

2:.....
237 bula gulnguy guwa=thanyjii-mani
3duNOM boat sink-CAUS+PAST
"The two of them sank the boat."
2: repeat gesture of 236.

3:..... !.....>
238 bulaan mayi wuwaa
3duDAT food give+IMP
"Give the two of them some food."
3: R: "G" out, points down at ! and holds...

>.....!....
239 take em back
R: held in "G" from line 238, raised upwards W at ! and back to rest.

Here JB, still facing west, performs the role of the German missionary. He has placed the two shipwrecked men in front of him (hence, probably incidentally, also to the west) where he points in line 236. "Give them food," he orders, pointing down and in front, as in Figure 17. When he points to where they should be taken, in line 239 (Figure 18), he again points west (back to Elim from Cape Bedford—see Map 2 once again). All his outward pointing gestures seemingly are in the same direction, given by the direction he is facing, and thus indeterminately oriented or free.

In the 1982 version, the words and gestures are almost the same; however, the orientations are subtly different.

25. 2:..... 3:.....!.....>
235 those two coons there nhaathi nhayun gulnguy bula
see+PAST that boat 3duNOM
"Those two coons there, see? The two of them—"
2: head dip, L: up in "G", out to N an down.
3: same.

>.....
236 =guwa=thanyjii-mani
sink-CAUS+PAST
"—sank the boat."

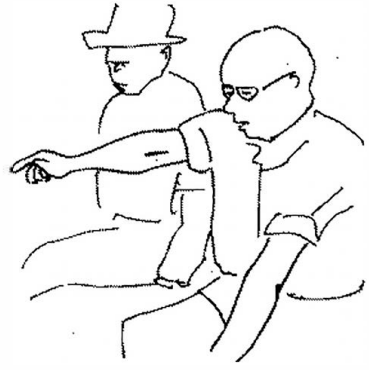


Figure 17
"Give 'em food."

Figure 18
"Take 'em back!" (1980)

4:. . . . . .
239 take em back

240 r; mm
4: same as 1-3 above.

1:. . . . . 2:. . . . . .
241 j; mayi wuwaa take em
food give+IMP
"Give them food, then take them."
1: R: up "loose 5" finger flipped out W.
2: r: in "bent L" flips from down, out W, up and back to rest.

242 r; maandii *guwa*
take+IMP *west=0*
"Take them west."

Here JB is facing north. He again acts the part of the missionary, and he has again placed "those two" in front of himself, apparently in the interactive space given by his mimed conversation. Thus he now points to them by pointing north at line 235. He also seems to mimic the "take 'em back" gesture with a kind of dismissive hand flip up and outwards, still to the north at line 239.

However, his reformulation at line 241 returns to anchored narrative space. He now gestures to the west, with a small flick of his hand (see Figure 19), to show that the two men should be taken back to Elim, that is, west. Strikingly, JB's interlocutor RH clearly arrives at this unverbalized directional understanding, echoing it verbally with an explicit cardinal term *guwa* 'west=0' at line 242.

Figure 20 illustrates the superimposition of spaces in this segment of the narratives. JB uses narrated interactive space to "quote" the interactive

Figure 19
"Feed 'em, take 'em."

gestures of his narrated protagonists. These gestures thus parallel "quoted speech," characterized as "demonstrations" by Clark and Gerrig (1990), by contrast with "reported speech," which shifts at least some of the deictic values in the putative original utterance being reported—altering pronouns or tenses, for example. As in the latter case, "correctly oriented" pointing gestures in narrated scenes have been brought partially into line with the cardinal directions given by the current speech event. They are thus *reported* or narrated gestures. *Quoted* gestures, on the other hand, recreate the interactive context of the narrated events and are thus freed from the geographical orientation of the narrating here-and-now.[27] JB's deserved renown as a champion storyteller surely derived in part from his skillful juxtaposition of evocative "quotation," in both word and gesture, on the one hand, and customary as well as inferentially expressive geographical precision on the other.

Local Anchored Space

The least neutralizable gesture space is centered on the speech event itself and includes the immediate local surround. Here one can, as I have mentioned, point to the protagonists of narrated events when they are physi-

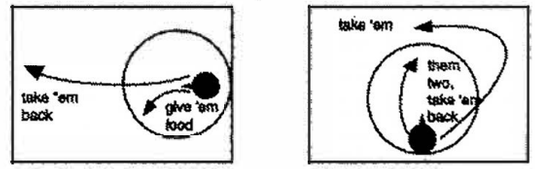


Figure 20
"Take 'em back."

cally present. Other gestures that point at local space have a dual interest: they are highly *creative* acts of reference—that is, they establish an initial reference to people who are being introduced into the narrative (Marslen-Wilson et al. 1982); and they are often highly marked, socially and interactively significant references whose silent character may also generate specific inferences. Moreover, although local space is in a clear sense immediately present and available to all interlocutors, it may contain entities that are available only after the appropriate conceptual calculations have been performed.

Consider how JB refers to two protagonists with important roles in the story, both of whom are deceased. When he refers to the "boss for all boats," an important man in the mission society at that time whom the two shipwrecked men preferred to avoid, he has recourse to two sorts of indirection, both in word and in gesture. In the 1980 version, he offers a complex pointing gesture off to the south.

26.
169 old man yii Bowen he—
here
This old man Bowen, he...
R: "G2" crosses face S, and eyes sight along finger straight S, retract to lap and square up.

This gesture, illustrated in Figure 21, can only be interpreted as pointing in anchored local space to the spot at modern Hopevale where the house of this same old man Bowen formerly stood (also shown on Map 1). JB goes on to locates Bowen in anchored narrative space, showing that his house

Figure 21
"Old man Bowen, here."

on the beach at Elim was in a westerly direction relative to the house where they decided to go for help, Woibo's house on the east.

In the 1982 telling, JB uses a different circumlocution, tailored to the context. Old man Bowen was, in fact, the father-in-law of (and thus a person to be treated with deference and respect) JB's interlocutor RH. This is how he describes the two shipwrecked mens' decision to avoid this authoritarian old man.

27.
171 ngali b-bada gaari gada-y nhaathi ngaathiina
1duNOM down not come-PAST see+PAST father-in-law
We didn't go down there with—
Gaze moves L to engage RH.

172 =nhanu-mu-gal nyulu nguba ngaliin gurra-ya
2sGEN-CAT-ADESS 3sNOM perhaps 1duACC say-PRECAUT
—with your father-in-law, see, because he was liable to scold us.

173 r; aa

174 j; warra thirranh-gurr
old old man-PLU+ABS
The old fellow.
R: loose "G" point W (at R?), and head and gaze drop.

Once again, the pointing gesture at line 174 uses local space. JB points apparently at RH, indexing with gesture the fact that it was *RH's* "old man" that they wanted to avoid (Figure 22).

Using the convention of a heavy dark rectangle to represent local anchored space and the lighter rectangle to represent narratively anchored space, I have diagrammed these two gestural episodes in Figure 23.

Figure 22
"The old fellow."

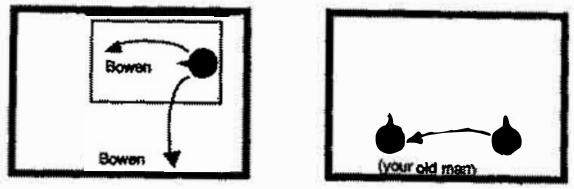


Figure 23
Old man Bowen.

Here is a final example of the complex laminations of varieties of gesture space within which referents can be located. When the missionary, using the scout whistle hanging by his door, summoned a helper to take the two men back to the boat, he called on Paddy, the dorm boss. Paddy is also long dead, and once again JB takes some care with how he refers to him. In the 1980 telling, he combines three different spaces to do the job.

28. .....a....b.....
230 nhangu . Paddy .
3sDAT
(speaking to) Paddy..
R: curled up in "D" back ESE over shoulder, strokes E in "G" hand twice at (a) and (b).

.....a.....
231 nyulu in charge for dormitory-ngu nhaathi
3sNOM dormitory-PURP see+PAST
...you see he was in charge of the dormitory.
R: "G" points down in front, circling at (a).

Figure 24
"Him . . . Paddy."

..... ! .....
232 nhayun guwaar nhanu thaawi . bama guthiirra wanhu-buthu
that+ABS west=R 2sACC call+PAST man two who+ABS-EMPH
"[He's] calling you there to the west . . . who are the two men?"
R: "bent L" up W, mid body level.

First, at line 230, JB refers to Paddy by pointing back over his shoulder, within anchored *local* space (Figure 24). He is pointing at the house that this same Paddy built, well known to all his interlocutors, but from the current vantage point out of sight to the east.[28] (Refer again to Map 1.)

Next he signals Paddy's role at Cape Bedford as dormitory boss, tracing a small "dormitory" circle in front of him at line 231. He has switched spaces concurrently with shifting footings, characterizing the protagonist and his role in the narrative by a swift framing comment—"you see he was in charge of the dormitory." Orientation is evidently irrelevant in this little gesture, which is performed in the interactive or narrating space between JB and his interlocutors. Figure 26 thus draws the gesture in a dark oval, the unoriented or "free" interpersonal space of the storytelling session.

Finally, in line 232, JB locates Paddy apparently in anchored narrative space, putting him implicitly in the dormitory to the east of where the unknown two men pointed to on the west are waiting for him (Figure 25).

In the 1982 telling, JB uses only narrative space to locate Paddy. He puts him in the dormitory, to the east of the narratively established origo of the missionary's house, where JB and his companion were waiting on the veranda.

29. 2:..... 3:.....
222 nyulu paddy dormitory nhaathi
3sNOM see+PAST
Paddy was (in charge of) the dormitory, see?
2: R: "3" points up NE, away E, to rest.
3: head gaze off W toward RH.

Figure 25
"Two men there to the west."

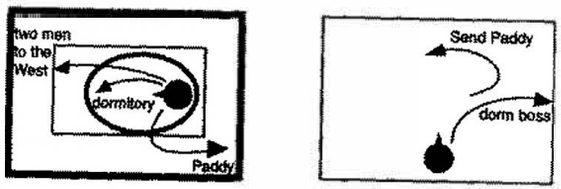


Figure 26
"Send Paddy."

4:.....
224 j; dormitory boss
4: R: "3" point up NE, like 2 above (line 222), but reduced.

5:.....
225 paddy diiga-la
send-IMP
"Send Paddy!"
5: R: "C" beckoning from NE, up and back NW.

JB has placed the dormitory off to the east of the missionary's house. He can thus point toward Paddy and the dorm by pointing out to the east, later using a beckoning gesture to summon Paddy west to do the missionary's bidding. I have diagrammed these two episodes in Figure 26.

Inferential Pointing and Inferred Location

My presentation has in a sense worked backwards, starting with those gestures that are only interpretable when calculated from a narrated origo, and supplemented by cardinal directions (and other indexical values) borrowed from the speech situation itself. I then examined gestures apparently freed from cardinal directionality, both in the immediate interactive setting and in narrated settings of the same sort. Only at the end have we met the apparently primordial pointing gestures whose referents are directly indexed in the here-and-now; and even here the links of contiguity have often proved indirect, mediated by social history.

By way of a concluding summary, let me list some of the possibilities. JB's gestures can aim

1a. at the anchored local space of the speech situation, where he can
   a. point at a copresent protagonist who figures in the narrative, either directly or indirectly through links of kinship or historical association (RH's "old fellow" in Figure 22); or
   b. exploit more mediating links from the current interpersonal context to the intended referent (as when JB gestures in the direction of the now collapsed house of a deceased man who figures in the story in Figure 21); or

1b. still within the locus of the immediate interaction, at the interactional space in which a narrator can arbitrarily
   a. demonstrate (the shark fin in front of JB's nose), or
   b. locate in an act of gestural baptism (Paddy "in charge of the dormitory" at illustration 28, line 231); or
2. at a narrated space, anchored on a discursively established origo and laminated over local space so as to inherit its cardinal orientation, thereby locating referents by their indicated positions, either
   a. presupposably, when relative narrated positions are known to interlocutors (for example, the walk east from Elim to Cape Bedford) or
   b. calculably, recoverable by inference (for instance, the motion of the capsizing boat, the relative positions of the swimmers, the trajectory of the moving shark); or, finally,
3. at a narrated interactional space, established discursively, but providing an autonomous locus of reanimated narrated interactions of both types (1a) and (1b) above, which may depict, for example:
   a. unoriented narrated gestures (the missionary gesturing angrily at the two boatmen); or
   b. oriented narrated gestures (a protagonist who gestures east toward a house that stood formerly to the east of the spot where the narrated events were taking place).

It is this multiplicity of "gesture spaces" (Haviland 1990), and the evanescent shifting between them, that belies the alleged simplicity of "pointing" gestures as primitive referential devices.

Two tellings of a single story are clearly nothing more than a rather sorry beginning to a much larger project. Even sorrier, unfortunately, is the state of GY in modern Hopevale where, as I have remarked, some people think *naga* is a mere demonstrative. Full GY morphology clearly placed heavy demands on speakers' senses of orientation. The nearly obligatory use of cardinal direction forms had as a corollary unrelenting directional attentiveness. JB's narrative exploitation of this system, a decade ago, relied equally on his virtuosic skills and on his interlocutors' directional senses. There are no storytellers like JB anymore, and the directional acuity of modern semi-speakers of GY—the subject of recent work by Levinson (1992) and de León (1992)—may be rather poorer than that of JB, RH, and their companions.

In gesture, as in most linguistic matters, GY speakers maintain a clear connection between social relations, what there is to say, what can be said, and how it can (or ought to) be said. The possibilities for reference, as always, are entangled with nonreferential matters. Pointing can refer simply (by locating a referent, perhaps) but accomplish this locating in a complex way. In the shipwreck story, such complexity in pointing gestures surfaces in the juxtaposition of chains of kin, the etiquette of language, and presuppositions about what interlocutors do and should know about geography and direction.

JB's entire performance depends crucially on knowledge, shared and continually reconstructed between interlocutors, about (social) geography and its historical transformations. JB relies on his interlocutors' ability to orient themselves within the spaces he establishes, which he thereafter uses to construct his narrative. Part of the anthropological task is to characterize the understandings that make communities like Hopevale, that define their boundaries and provide the common coin of social meaning. In aboriginal Australia, such understandings involve the bare and contingent features of the physical map and the salient entities that populate it. I hope to have shown that both GY morphology and gestural usage directly encode aspects of both the ethnography and the social history of space.

Notes

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1. Cook's diary for July 23, 1770 (Cook 1955:363).

2. See Haviland and Haviland (1980) for a description of the European invasion of the territory of the GY people, during the Palmer River goldrush of the 1870s.

3. The comitative form of this root, *yimithirr* 'with this' (or *yimuthirr* 'this way') is part of the language name *guugu yimithirr* 'this kind of language' (or perhaps, 'language with [i.e., that uses] the word *yii*').

4. A possible underlying model suggests motion or position along an oriented path, with a front or leading part (*thagaal*), a rear (*gurriir*, or sometimes *buga* 'hind end'), and a position in between (*gaarbaarr*). The expression *thagaal-bi* 'front-LOC' has the temporal meanings "first" and "a long time ago" (compare English *before*). See Laughren (1978) for a similar system in Warlpiri.

5. The lexicon does distinguish left from right hands, and left- from right-handedness.

6. GY supplements this system with a lexicalized verticality opposition—routinely also transposed onto the horizontal plane—between *bada* 'down, below' and *wunggaar* 'up, above'. These two roots also display some of the same morphological complexities characteristic of cardinal direction roots, notably reduplicated forms and elaborated locational cases. There is also a relational noun *gana* 'underside, bottom, area projected below'.

Parallel sets of directional terms are common throughout Australia. See Dixon (1972), Laughren (1978), and especially Evans (in press) for an elaborated case. In Cape York Peninsula, GY's neighboring languages all have cognate terms for the cardinal directions, although descriptions of usage are lacking. Similarly insistent systems of directions are found in Malagasy and other Austronesian languages, and in such American Indian languages as Wintu (Pitkin 1984; Talmy 1983) and Tzeltal (Brown and Levinson 1991).

7. Levinson (1991) points out that a language like GY seems directly to contradict the claims of Miller and Johnson-Laird (1976) that "ordinary languages are designed to deal with relativistic space; with space relative to objects that occupy it. Relativistic space provides three orthogonal coordinates, just as Newtonian space does, but no fixed units of angle or distance are involved, nor is there any need for coordinates to extend without limit in any direction" (1976:380). Miller and Johnson-Laird suggest that it has taken two millennia of Western scientific thought to develop beyond ordinary (and universal) notions of relative space to a scientific, absolute system of Newtonian space within which position is defined as fixed angles or distances in an infinite three-dimensional grid.

8. Fuller treatment of the nuances of meaning involved, with textual examples, is found in Haviland (1986). Such aspects of perspective, including what Fillmore (1983) calls goal-oriented, source-oriented, and neutral—necessary to an analysis of verbs like *come* and *go* and their relatives—have rarely been described in connection with locational expressions, or demonstratives, where dimensions like relative distance, visibility, and certain evidential properties are more frequently reported to be encoded (but see, for example, Hanks 1984, 1990).

9. Examples are from conversational transcripts. The new practical orthography, sporadically in use at Hopevale, differs from previous published material on GY in using *th* for a lamino-dental stop, and *j* for a lamino-palatal stop.

10. Note the constituency here. It is typical for only the last word of a *continuous* constituent to bear case inflection for the whole, suggesting that *nagaalu* must be construed as part of the constituent *birri bitha-wi* 'to the little creek'.

11. A colon preceding a suffix indicates that the suffix engenders lengthening, in the appropriate phonological context, on the previous syllable (see Haviland 1979c:144ff.).

12. Another 13 percent are followed by a form of bada 'down', and nearly all the rest are combined with personal references, e.g., yarra Bowen 'that fellow Bowen (over there)'. Notably, a speaker of GY in his late twenties reports that when he learned GY as a child he thought for many years that an expression like yarra naga meant nothing more than 'over there (look!)'—regardless of the cardinal direction. It was only as an adult that he realized the four cardinal terms were in contrast.

13. As a rough measure of frequency, out of the roughly 110,000 tokens of about 9,600 distinct inflected word types in my corpus of GY text, just over 2,000 (or one word in about 55) are inflected forms of one of the four cardinal direction roots.

14. Such standardized gestures can be incorporated into otherwise spoken utterances as equivalents to and total replacements for other sign vehicles. One example in modern GY is the *guya* 'nothing' gesture, used to mean 'there is none,' or 'it's all

gone'. This emblem displays an empty hand, and the gesture clearly has long standing in the Cooktown area (see Roth 1908:bull. #11, p. 90, plate xviii #20). In recent work Kendon (1990, 1992) has called these "quotable gestures"—partly because they can be said to have a conventional "citation" form—although, as discussion below suggests, other sorts of nonemblematic gestures are also, in an important sense, quotable.

15. In interactive settings, Scheflen's well-known research established the phenomenon of "quasi-courtship" between interactants (Scheflen 1964, 1965) that involves the precise synchronization of bodily movements, including major body shifts. Such results show how closely people attend to each others' conversational cues, including gesture and gaze (Kendon 1972; Goodwin 1981). The relative timing of iconic gestures and speech has been the focus of detailed investigation (see Kendon 1980, Beattie 1983; but also the doubts expressed in McNeill and Levy 1982:284).

16. If not, as Michael Silverstein points out, obscenity.

17. For classic accounts, see Hart (1930) and Stanner (1937); more recent examples are discussed in Dixon (1980:27ff, and note 2.1, p. 478). Around Hopevale, people still tell the story of *ngamu bigibigi* 'old man Pig', whose death in the 1930s meant that the people of his camp could no longer talk about "going to hunt *bigibigi*" when they went after wild boar, but had to substitute the euphemism "hunt *nanigut*" (nanny-goat).

18. Bellugi and Klima report the apparently surprising finding that deaf children have the same sort of difficulty acquiring ASL pronouns—which are essentially points to the torsos of speaker, addressee, present third party, etc.—that hearing children have acquiring shifting spoken pronouns, a finding that suggests to the authors that children "appear to ignore the apparent iconicity [of pointing gestures] that is available to them" (1982:309).

19. Nick Evans (in press) reports, of the Bentinck Island language Kayardild, that even invente dbr imaginary objects—for example, a hypothetical spear imagined to be piercing an animal—have a cardinal orientation.

20. A maximally annotated line of the transcript has the form:

1. {[Gestural span, see symbols below.....]}
2. Original transcribed speech
3. Word-by-word gloss of GY words
4. A free English gloss.
5. For each gesture: a description, including location, hand form, and relevant directionals.

On 1, the gesture-tracking line, dots (....) show the span of the gesture in relation to the concurrent speech. The following symbols may also appear:

1, 2, 3, etc.: differentiated gestures separately annotated.
!, a, b, c, etc.: points at which specific motions or changes in position are annotated.
o: onset of a gesture.
r: beginning of a retracting motion to rest position.
p: a specific "pointing" motion.
hm: "home" position or rest.
> and <: signals that a gesture continues to or from another transcript line.

In gesture descriptions, *N*, *S*, *E*, and *W* denote absolute vectors of position or direction (north, south, east, and west) from the participant's point of view. *0* refers to the neutral gesture space in front of a speaker. *L* and *R* introduce movements of left and right hands; *both* introduces two-handed movements. Hand shapes, in approximate ASL spelling, are shown in quotation marks ("G," "5," "L," etc.). Body-centric or cardinal orientation of hands, head, gaze, etc., are also roughly indicated.

21. In transcripts the colon signifies not ordinary vowel length but the hyper-elongated vowels characteristically used by traditional GY narrators to express duration, exaggerated motion, excessive distance, and the like. At this point in the narrative, JB emphasizes the constant motion of the boat and waves as she jumped into the water.

22. Note that there is in any case a shift from the narrated dialogue of line 69 (where *nyundu* 'you' is the other sailor) to the hypothetical framing of lines 70–71, where the second person dual subject *yubaal* appears to invite RH to put himself into JB's shoes: "If you two [i.e., he and I] swim too close, he'll grab you [i.e., me]." With characteristic astuteness, Michael Silverstein spotted this indexical transposition.

23. In many examples, English words and phrases are freely mixed with GY forms, a phenomenon typical of ordinary speech at modern Hopevale Mission (see Haviland 1982, 1985). Hopevale English does not normally use *north*, *south*, etc., which makes JB's gestures when he is talking English all the more interesting.

24. The image may, of course, be standardized. Little comparative information about pointing gestures in other Australian languages is available. Kendon's work on the Warlpiri-based Yuendumu sign language (YSL) is suggestive but not conclusive, as he does not describe fully the perspective within which pointing takes place in that language. Directional pointing is a formative in several YSL signs, as he notes:

> In some signs the direction of movement of sign is varied according to the re ferent of the sign. . . . For example, in *wurajilate afternoon* #280 the arm is extended in the direction of the setting sun. . . . In *ya-nilto go* #384, the direction of going may be indicated by the direction in which the hand is moved. [Kendon 1983:xlv]

In the list of signs, I find, in addition to the two mentioned, only the following that incorporate pointing: #519, 'far off, very far, beyond', "Direction of item being described" (note that it is high, with fingersnap); #606613, touching or pointing at body parts; #636, west side, east side . . . "Direction of movement of sign according to the direction referred to"; #713, 'to follow someone, or animal'; #731, 'to go in procession'. No separate signs are listed for the cardinal points, and we are not informed whether absolute directional orientation is maintained or how.

25. In a way parallel to uses of the "historical pre sent," as Michael Silverstein observes.

26. English speakers accomplish similar shifts of perspective, too, but they do not normally maintain directional orientation in either word and gesture. See Haviland (1991) for more on the theme of transposition.

27. Michael Silverstein suggests the label "narrated interactional text," suggesting that it is the nature of the performed text, rather than some putative "space," that is at issue.

28. Perhaps the downward slant to JB's gesture here, in contrast to the repeated raised gestures used to signify distance as illustrated above, iconically suggests the relative invisibility of the house in question, obscured by several intervening buildings.

References Cited

Beattie, Geoffrey
1983 Talk: An Analysis of Speech and Non-verbal Behavior in Conversation. London: Open University Press.

Bellugi, Ursula, and Klima, Edward
1982 From Gesture to Sign: Deixis in a Visual-Gestural Language. *In* Speech, Place, and Action: Studies in Deixis and Related Topics. Robert J. Jarvella and Wolfgang Klein, eds. Pp. 297–314. Chichester, England: John Wiley.
Birdwhistle, Ray L.
1952 Introduction to Kinesics. Louisville, KY: Louisville University Press.
1963 The Kinesis Level in the Investigation of the Emotions. *In* Expressions of the Emotions in Man. P. H. Knapp, ed. Pp. 123–139. New York: International University Press.
Brown, Penelope, and Levinson, Stephen C.
1991 "Uphill" and "Downhill" in Tzeltal. Working Paper No. 7. Nijmegen, Netherlands: Cognitive Anthropology Research Group, Max Planck Institute for Psycholinguistics.
Bühler, Karl
1982[1934] Sprachtheorie: Die Darstellungsfunktion der Sprache. Stuttgart: Gustav Fischer Verlag.
Calbris, Genevieve
1990 The Semiotics of French Gesture. Bloomington: University of Indiana Press.
Cassell, Justine, and David McNeill
1991 Gesture and the Poetics of Prose. Poetics Today 12(3):375–404.
Cook, James
1955 The Journals of Captain James Cook, The Voyage of the Endeavour 1768–1771. J. C. Beaglehole, ed. Cambridge: Cambridge University Press.
Clark, Herbert H., and Richard J. Gerrig
1990 Quotations as Demonstrations. Language 66(4):764–805.
de León, Lourdes
1992 The Use of Geo-centric Location by Young Speakers of Guugu Yimithirr. Lecture delivered to the Cognitive Anthropology Research Group, Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands.
Dixon, Robert M. W.
1971 A Method of Semantic Description. *In* Semantics. Danny D. Steinberg and Leon A. Jakobovits, eds. Pp. 436–471. Cambridge: Cambridge University Press.
1972 The Dyirbal Language of North Queensland. Cambridge: Cambridge University Press.
1980 The Languages of Australia. Cambridge: Cambridge University Press
Ekman, Paul
1976 Movements with Precise Meanings. Journal of Communication 26(3):14–26.
Evans, Nick
In press Kayardild Grammar. Berlin: Mouton de Gruyter.
Fillmore, Charles
1983[1971] How to Know Whether You're Coming or Going. *In* Essays on Deixis. Gisa Rauh, ed. Pp. 219–228. Tübingen: Narr.
Goffman, Erving
1979 Footing. Semiotica 25(1/2):1–29.
Goodwin, Charles
1981 Conversational Organization: Interaction between Speakers and Hearers. New York: Academic Press.
Grice, H. P.
1975 Logic and Conversation. *In* Syntax and Semantics 3: Speech Acts. P. Cole and J. Morgan, eds. Pp. 41–58. New York: Academic Press.

Hanks, William F.
1984 The Evidential Core of Deixis in Yucatec Maya. *In* CLS 20: Papers from the Twentieth Regional Meeting of the Chicago Linguistics Society. Joseph Drogo, Veena Mishra, and David Testen, eds. Pp. 154–172. Chicago: Chicago Linguistics Society.
1990 Referential Practice. Chicago: University of Chicago Press.
Hart, C. W. M.
1930 Personal Names among the Tiwi. Oceania 1(3):280–290.
Haviland, John B.
1979a Guugu Yimidhirr Brother-in-Law Language. Language in Society 8(3):365–393.
1979b How to Talk to Your Brother-in-Law in Guugu Yimidhirr. *In* Languages and Their Speakers. Timothy Shopen, ed. Pp. 160–239. Cambridge, MA: Winthrop.
1979c Guugu Yimidhirr. *In* Handbook of Australian Languages, I. R. M. W. Dixon and Barry Blake, eds. Pp. 27–182. Canberra: Australian National University Press.
1982 Kin and Country at Wakooka Outstation: An Exercise in Rich Interpretation. International Journal of the Sociology of Language 36:53–70.
1985 The Evolution of a Speech Community: Guugu Yimidhirr at Hopevale. Aboriginal History 9(1/2):170–204.
1986 Complex Referential Gestures. Stanford, CA: Center for Advanced Study in the Behavioral Sciences.
1990 Gesture Spaces. Paper (with accompanying videotape) presented at the Annual Meeting of the American Anthropological Association, New Orleans.
1991 Xi chbat ta lok'eb k'ak'al "It Goes toward the Sunrise": Sculpting Space with the Body. Nijmegen, Netherlands: Cognitive Anthropology Research Group, Max Planck Institute for Psycholinguistics.
In press Projections, Transpositions, and Relativity. *In* Rethinking Linguistic Relativity. John J. Gumperz and Stephen C. Levinson, eds. Cambridge: Cambridge University Press.
Haviland, Leslie K., and John B. Haviland
1980 How Much Food Will There Be in Heaven? Lutherans and Aborigines around Cooktown before 1900. Aboriginal History IV(part 2):118–149.
Jakobson, Roman
1957 Shifters, Verbal Categories, and the Russian Verb. Mimeo. Cambridge, MA: Russian Language Project, Dept. of Slavic Languages and Literatures, Harvard University.
Kendon, Adam
1972 Some Relationships between Body Motion and Speech: An Analysis of an Example. *In* Studies in Dyadic Communication. A. W. Seigman and B. Pope, eds. Pp. 177–210. Elmsford, NY: Pergamon Press.
1980 Gesticulation and Speech: Two Aspects of the Process of Utterance. *In* Relationship between Verbal and Nonverbal Communication. Mary Ritchie Key, ed. Pp. 207–227. The Hague: Mouton.
1983 A Study of the Sign Language in Use among the Warlpiri of Central Australia. Final report for grant no. BNS-802-4173. Washington, DC: National Science Foundation.
1984 Some Uses of Gesture. *In* Perspectives on Silence. Deborah Tannen and M. Saville-Troike, eds. Pp. 215–234. Norwood, NJ: Ablex.
1988 Sign Languages of Aboriginal Australia. Cambridge: Cambridge University Press.

1990 Gesticulation, Quotable Gestures, and Signs. *In* Culture Embodied, Senri Ethnological Studies, 27. Michael Moerman and Masaichi Nomura, eds. Pp. 53–78. Osaka: National Museum of Ethnology.

1992 Some Recent Work from Italy on Quotable Gestures (Emblems). Journal of Linguistic Anthropology 2(1):92–108.

Laughren, Mary

1978 Directional Terminology in Warlpiri. *In* Working Papers in Language and Linguistics, 8. Thao Le and Mike McCausland, eds. Pp. 1–16. Newnham: Tasmanian College of Advanced Education.

Levelt, Willem J. M., Graham Richardson, and Wido La Hei

1985 Pointing and Voicing in Deictic Expressions. Journal of Memory and Language 24(2):133–164.

Levinson, Stephen C.

1987 Minimization and Conversational Inference. *In* The Pragmatic Perspective. M. Papi and J. Verscheuren, eds. Pp. 61–129. Amsterdam: Benjamins.

1991 Relativity in Spatial Conception and Description. Working Paper #1. Nijmegen, Netherlands: Cognitive Anthropology Research Group, Max Planck Institute for Psycholinguistics.

1992 Language and Cognition: The Cognitive Consequences of Spatial Description in Guugu Yimithirr. Working Paper #13. Nijmegen, Netherlands: Cognitive Anthropology Research Group, Max Planck Institute for Psycholinguistics.

Marslen-Wilson, William, Elena Levy, and L. K. Tyler

1982 Producing Interpretable Discourse: The Establishment and Maintenance of Discourse. *In* Speech, Place, and Action. R. J arvella and Wolfgang Klein, eds. Pp. 271–295. Chichester, England: John Wiley.

McNeill, David

1985 So You Think Gestures Are Nonverbal? Psychology Review 92(3):350–371.

1992 Hand and Mind: What Gestures Reveal about Thought. Chicago: University of Chicago Press.

McNeill, David, and Elena Levy

1982 Conceptual Representations in Language Activity and Gesture. *In* Speech, Place, and Action. R. J arvella and Wolfgang Klein, eds. Pp. 271–295. Chichester, England: John Wiley.

McNeill, David, Elena T. Levy, and Laura L. Pedelty

1990 Gestures and Speech. *In* Advances in Psychology: Cerebral Control of Speech and Limb Movements. Geoffrey R. Hammond, ed. Pp. 203–256. Amsterdam: Elsevier/North Holland.

Miller, George A., and P. N. Johnson-Laird

1976 Language and Perception. Cambridge, MA: Harvard University Press.

Morris, Desmond, P. Collett, P. Marsh, and Marie O'Shaughnessy

1979 Gestures, Their Origin and Distribution. New York: Stein and Day.

Pitkin, Harvey

1984 Wintu Grammar. Berkeley: University of California Press.

Roth, Walter E.

1908 Miscellaneous Papers, North Queensland Ethnography, Bulletin #11. Records of the Australian Museum 7(1):74–107.

Scheflen, Albert

1964 The Significance of Posture in Communication Systems. Psychiatry 27(3):316–331.

1965 Quasi-Courtship Behavior in Psychotherapy. Psychiatry 28(3):245–257.

Schegloff, Emmanuel

1984 On Some Gestures' Relation to Talk. *In* Structures of Social Act ion: Studies in Conversation Analysis. J.M. Atkinson and J. Heritage, eds. Pp. 266–296. Cambridge: Cambridge University Press.

Sherzer, Joel

1972 Verbal and Nonverbal Deixis: The Pointed Lip Gesture among the San Blas Cuna. Language and Society 2(1):117–131.

Silverstein, Michael

1976 Shifters, Linguistic Categories, and Cultural Description. *In* Meaning in Anthropology. K. Basso and H. Selby, eds. Pp. 11–56. Albuquerque: University of New Mexico Press.

1992 Metapragmatic Discourse and Metapragmatic Function. *In* Reflexive Language. John A. Lucy, ed. Pp. 33–58. Cambridge: Cambridge University Press.

Stanner, W. E. H.

1937 Aboriginal Modes of Address and Reference in the Northwest of the Northern Territory. Oceania 7(3):300–315.

Talmy, Leonard

1983 How Language Structures Space. *In* Spatial Orientation: Theory, Research, and Application. H. Pick and L. Acredolo, eds. Pp. 225–282. New York: Plenum Press