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An Agenda for Gesture Studies

Adam Kendon

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Although interest in gesture is of very long standing (see Kendon 1982, Schmitt 1984, 1990 for discussions of the history of gesture studies), it is only within the last decade and a half that the relevance of its study to a number of important theoretical issues has again become apparent. For much of this century gesture has been regarded, at best, as a rather trivial aspect of human expression. As a result, despite the large number of books and articles that have been published on the topic since publishing began, we still appear to be on the edge of an unknown territory. This Agenda is an attempt to lay out what appear to be the more important lines of investigation that still need to be pursued in regard to gesture. It is based on a document written (in April 1995) as a personal response to a list of questions about gesture that was circulated privately by Steven Levinson of the Cognitive Anthropology Research Group at the Max Planck Institute for Psycholinguistics at Nijmegen.

A. What is 'gesture'?

In everyday discussion we all think we know what we mean by 'gesture.' The problem is to make explicit on what this knowledge is based.

I propose a series of studies to explore how people perceive and differentially attend to one another's activities in interaction. One approach is simply to have people look at films of others in interaction and have them describe what they see. If you do this (as I have done - see Kendon 1985) I expect you will find a great deal of consistency in that people will tend to treat separately activities (typically of hands and arms, but not always and not only) that they perceive as "part of what the person is trying to say." People seem quite willing to see such activities as "foreground" and to treat things like posture shifts as background, and report, only after prodding, various self-touchings, fiddly movements, etc. that, in daily life, we routinely disattend in one another. (cf. Goodwin and Goodwin 1986).

This 'strand' of activity (which we also refer to when we use the term 'gesture' or 'gesticulation') has certain characteristics which distinguish it from other kinds of activity (such as practical actions, postural adjustments, orientation changes, self-manipulations, and so forth). These include:

- Gestures are 'excursions': phrases of action recognized as 'gesture' move away from a 'rest position' and always return to a rest position (cf. Schegloff 1984).
- 'Peak' structure: Such excursions always have a 'centre' (recognized by naive subjects as the 'business' of the movement, what the movement actually 'does' or what it was 'meant for'). This (since Kendon 1980) has been referred to by some as the 'stroke' of the gesture phrase
- Well boundedness: phrases of action identified as gesture tend to have clear onsets and offsets. This is in contrast to orientational changes or posture shifts which sometimes can be quite gradual and have no 'peak' structure.
- Symmetry. If you run a film of someone gesturing backwards it is remarkable how difficult it seems to be to see the difference from when you run the film forwards. This suggests that gesture phrases have a symmetry of organization that practical actions, posture shifts (and of course spatial movements, etc.) do not have.

I think it would be worthwhile to pursue a programme of research on the perception of action to try to identify what appear to be the movement features that people rely upon to separate 'gesture' (actions perceived as produced to 'say something', etc.) from other kinds of actions. I think computer construction of abstract movement patterns could be exploited usefully here. Following the discoveries of Michotte (1950) on the 'perception of causality' and the somewhat more recent work of Johanssen (1973) on the perception of biological motion, I think one could profitably explore the parameters of movement configurations that are distinguished as 'gesture' or 'gestural' in contrast to those that are not.

B. Towards a 'Gesture Kinetics'

Such a programme of work could be linked to, and would contribute importantly, to research on what might be called the 'kinetics' of gesture (in parallel to 'phonetics'). We really have little

explicit knowledge about how gestures are organized as physical actions (cf. the remarks on this point in Armstrong, Stokoe and Wilcox 1995). I have mentioned a few features under A above,but these are only the merest hints. (These features, by the way, will apply whether or not gesture is being deployed in relation to speech or is being deployed on its own).

An important part of the 'kinetics' research should include a study of just how gesture phrases are organized in relation to speech phrases. In Kendon (1972, 1980) I showed that there is a consistent patterning in how gesture phrases (which I tried to define in terms of the perceptually marked 'stroke' - which is analogous to the central syllable of a David Crystal (Crystal and Davy 1969) 'tone unit' - and the 'preparation' and 'recovery' phases of action) are patterned in relation to the phrases of speech (viewed as intonation units, breath groups - specifically David Crystal 'tone units'). I showed that just as, in a continuous discourse, speakers group tone units into higher order groupings and so we can speak of a hierarchy of such units, so gesture phrases may be similarly organized. For example, over a series of tone units linked intonationally or by an absence of pauses into a coherent higher order grouping, the co-occurring gesture phrases are also linked. We can see this because they all use the same hand, or there are no full recoveries between gesture phrases, or there is a thematic character to the handshapes used; and then over the next set of linked tone units the speaker organizes his gestural phrases in a contrasting way, using a different hand, different handshape themes, etc.

It has always seemed to me that a lot more careful work on how gesture phrases and speech phrases are organized needs to be done. Studies are needed that look at different aspects of how the gesture phrases are organized and different aspects of how the tone units are organized (e.g. intonation patterns, types of pauses, how tone-units are subordinated to one another, etc.) in relation to one another.

Work of this sort would certainly reveal one kind of hierarchical organization in gesture - and when looked at in relation to speech it would also show the extent to which this hierarchical organization in gesture as action can be mapped on to the hierarchical organization of speech, not only considered phonetically (from segmental sound to tone unit and tone unit groupings, and beyond) but also as considered from the point of view of phrase, sentence, discourse structuring; or from a semantic point of view.

There remains a controversy about the way in which gesture as an activity is related to speech. Some investigators appear to consider it simply as a kind of 'spill-over' effect from the effort of speaking, others see it as somehow helping the speaker to speak, yet others see it as determined by the linguistic choices a speaker makes as he constructs an utterance. An opposing view is that gesture is a separate and distinct mode of expresison with its own properties which can be brought into a cooperative relationship with spoken utterance, the two modes of expression being used in a complementary way (see Kendon 1983). Careful studies of just how the phrases of gesture and the phrases of speech are related would throw useful light on this issue (cf. the recent dissertations of McClave 1991 and Nobe 1996).

C. The Shapes of Gesture ['morpho-kinetics' of gesture]

Phrases of action recognized as 'gesture' also have content, in the sense that in these phrases of action we see many varieties of movement shapes, locational changes, hand-shape types, etc. However, these movements, hand-shapes, etc. are patterned and are probably pretty consistent from one speaker to the next.

It is often said that gesticulation is idiosyncratic, each speaker improvising his own forms. So far as I know, no one has ever really tested this claim. My own experience in gesture-watching suggests to me that people are far more consistent in what they do gesturally than this 'idiosyncrasy' claim would lead one to imagine. One's own experience in noticing differences in 'gesture style' from one culture to another, the work of David Efron (1972), etc. actually confirms this point. It suggests that there are inter-individual similarities in the patterning of gestural action and that such patterns are socially shared - hence there is conventionalization to a degree affecting all kinds of gesturing - but that different social groups, different cultures, have rather different patternings.

One useful line of investigation would be to see how far (within a given cultural group) gesturers are patterned and consistent in the movement patterns they use and the handshape forms they use. Genevieve Calbris (1990) in her Semiotics of French Gesture has gone some way towards attempting something like this. Thus she distinguishes a variety of movement patterns - curved,looping, circular, etc. - the planes in which these are done, the handshapes employed (open hand, spread hand, single digits projecting, etc.) and shows, or at least suggests, how there may be certain semantic consistencies to such gestural forms.

It is in this connexion that one might examine the issue of 'compositionality.' For instance, the hand held so that the thumb and index finger are bent to touch each other at their tips (the 'ring' hand) recurs in unstaged conversations that I recorded in various locales near Salerno in Italy. It occurs in contexts that suggest it marks precision, exactitude (Kendon 1995a). A horizontal movement of the hand may signify totality, inclusiveness, a full range of something. For example, a speaker refers to the full range of precise medical tests that had been sent to her, combining 'ring' hand with horizontal leftward movement as she does so. Again, sharp horizontal movement of hand with palm facing downwards often occurs in contexts where the speaker is expressing the idea of something cutting off, something finished, something not possible. A hand held so only thumb and index finger are extended is, in Italy (also France) used in a lexical gesture that means 'telephone'. A speaker, referring to an unsuccessful telephone call says "no one responded" and, as he does so, moves the "telephone" hand, held palm down, rapidly to the right. He thus combines a gesture expressing "cut off" with one referring to "telephone."

Examples of this sort can be multiplied. Several are described in de Jorio's (1832) treatise on Neapolitan gesture. Calbris also describes many examples of this sort. Clearly there is compositionality in gesture in the sense that we can see re-combinations of components. How far it extends, whether there are restrictions on this, whether there is any sort of hierarchical structure to such combinations - all this remains for further exploration. Rebecca Webb of the University of Rochester is about to complete a dissertation on this topic (Webb 1996). Using material gathered from recordings of U.S. TV talk shows, she has been able to demonstrate a high degree of consistency in the way in which speakers use a variety of handshapes.

D. What kinds of information do gestures encode?

The various typologies of gesture that have been put forward are in part attempts to classify gestures in terms of the information they encode, albeit at very general levels. These typologies are often logically inconsistent, in many cases formed on the basis of rather hasty observation with a good admixture of 'folk' categories thrown in. One of the best is that put forward by David Efron(1941/1972). Ekman and Friesen's paper of 1969, one of the most cited in the literature, presents Efron's ideas in a more systematic way, but some of the subtlety of Efron's original discussion is lost. A useful survey of some of the various typologies that have been proposed and how they may be related to the terminology set up by Efron has been published by Rimé and Schiaratura (1991). Here we set out in broad terms what appear to be the main ways in which gestures are used.

Gestures (i.e. phrases of bodily action that have those characteristics that permit them to be 'recognized' as components of willing communicative action)may be:

- utterances on their own
- they may be employed as components of utterances in alternation with speech
- they may be employed in conjunction with speech

Each of these possibilities will now be discussed briefly.

Gesture used alone: When gestures are employed as utterances all by themselves they tend to assume a highly conventionalized form. Every speech-community has a repertoire of such forms (sometimes referred to as 'emblems') however, from one community to another (as well as within a given community), there seems to be much variation in the extent to which gesture is used as a mode of utterance on its own. Accordingly, there is variation in the size of the repertoire of gestural forms that people can recall in a 'citation' context.

One useful line of work could be to gather such lists of 'citable' or 'quotable' gestures from different cultures and try, insofar as one can, to identify contexts of use for them, and to compare the glosses members of the communities in which they are observed or from which they are collected. Preliminary work along these lines (Kendon 1981, Payrató 1993) suggests that there may be a typical and rather restricted range of communicative functions that such 'quotable gestures' are said to fulfill.

However, remarkably little is really known about these forms. Above all, we badly need studies of their uses in context. First attempts along these lines can be found in Sherzer (1991, 1993); and Kendon (1995a). Incidentally, if we undertake such studies, we find that such gestures are often commonly deployed within the contexts of spoken utterance, either in alternation with speech or co-deployed with it. In terms of how they are used they do not seem to constitute the easily separable category they have so often been assumed to be.

Gesture co-produced with speech: Most utterances involve the use of speech and so the most frequent environment in which we observe gesture is as a component of spoken utterance.

Gesture may be used in alternation with speech: Sometimes gesture serves as a separate utterance, immediately after a speaker has finished speaking. Sometimes a speaker may be observed to leave a sentence unfinished in speech, but use a gesture to complete it.

Collections of examples of this sort of thing could be useful, especially if properly contextualized. This could give us some clues as to at least some of the ranges of uses to which speakers put gesture.

Gesture in conjunction with speech: This is what has often been called 'gesticulation' and in recent years has attracted the most attention (see McNeill 1992). In considering the relationship between gesture and speech, when they are used in conjunction, from the point of view of what 'meaning' each aspect of the utterance appears to be encoding, it is important to recognize the great variety of ways in which gesture is used. Generalizations about 'why people gesture' need to be qualified in many ways - and one thing that must always be taken into consideration is what the meaning role of the gesture-phrase is in relation to the meaning of the speech.

There are important and difficult methodological problems here. How do we 'know' what meaning role gesture is playing? Quite without apology, personally I use my 'common sense' and then (because I use video recordings) show my interpretations to others - and by discussion we can reach a consensus. Such a procedure can certainly be defended, however there are others who would prefer a more 'objective' method. But 'objective' methods carry their own problems.

Different ways in which gesture is used as an integrated (non-alternating) component of spoken utterance: Any utterance whatever is produced in some sort of social situation, it is produced under the guidance of some pragmatic aim, it plays a role in the interactional setting, it has a content that is being conveyed, etc. It has multiple functions, thus and, accordingly, it has multiple components which address these functions. Jakobson's (1960) ideas about this were basically along the right lines. In looking at gesture as a component of spoken utterance we may see that, variously, it also serves in relation to these various components of the utterance. For virtually any function that you can think of, examples of gestures can be found that fulfill it.

Content: For representation of aspects of content. Depicting path of movement, a mode of action (slicing a wolf's stomach open with an axe, etc. - from a recording of someone telling the story of Little Red Riding Hood. See Kendon 1993a), depicting relations in space between objects or entities - these are what McNeill (1992) has called 'iconic' gestures.

Such content that is represented may not be descriptions of actual or possible actions, events, spatial relationships, of course, but may be 'as if' entities, actions, spatial relationships that serve as metaphors for concepts at any level of abstraction (cf. McNeill 1992; Calbris 1990; Kendon 1993b).

It is my hunch (but only a hunch) that the more abstract and metaphorical the content the gesture pertains to, the more likely we are to observe consistencies in the gestural forms employed. To the extent that metaphors are socially conventionalized, to this extent also we may find that gestures used to represent metaphorical concepts will show social conventionalization also.

Probably, when faced with some very strange scene or picture that you are asked to describe, insofar as you use gesture to do so and insofar as you actually try to map gestural forms onto the images you seek to represent, you may tailor your actions to the individual concreteness of the thing being described and so may be quite individual in how you do this.

Even here, I suspect, we are going to observe certain consistencies: e.g. fists being used to represent smallish solid objects, flat open hands being used to represent surfaces, extended index fingers being used to represent long thin objects, or being used to depict alignments or directions of orientation, etc. The reason for this is fairly obvious: insofar as the hands are being used to make graphic images of something, they will be shaped accordingly. It is most unlikely that I will use a bunched hand to represent something thin and flat, a hand with the fingers spread and pointing up to represent a smooth surface, etc.

It would be useful here to take a look at Penny Boyes Braem's attempt at a 'semantic phonology' in American sign language (Boyes-Braem 1981), and its subsequent application in studies of Italian Sign Language by Virginia Volterra, Elena Pizzuto, Elena Radutzsky (see Volterra 1987; Radutzsky 1992). I think their demonstration of the consistency with which semantically based classes of signs share handshape and other features would prove very reminiscent of what speaking gesturers do as they represent things.

Pointing: Many gestures have a pointing component, as well as many that seem to be 'pure' points. What is pointed to can be actual objects in the world that surrounds the participants (actual object pointing), objects can be pointed to that can have a physical location, and do, but are not immediately present (removed object pointing), objects that can have real locations in space, but which are not present but which are given locations for the purposes of current discourse (virtual object pointing), and then there can be pointing to things that cannot in fact have any sort of object status at all and can have no location (metaphorical object pointing).

An interesting observation about pointing gestures is that they vary in what body part is used to accomplish them (head, lip, chin, elbow, foot, arm+hand) and, when the hand is used, the handshape also may vary (index finger, open flat hand held palm up, open flat hand held palm facing laterally, thumb). In addition, in pointing, the movement may not simply be linear, but can follow various patterns. Calbris (1990) has made the observation that there are semantic implications for what body part or hand-shape is used in pointing and she has an instructivediscussion on this. There are also semantic implications for what pattern of movement is employed.

Pointing gestures - or rather, gestures which have a clear pointing component - offer themselves as a relatively simple kind of gestural action where, by examining the combinations of movement, body part and handshape types employed, we might rather readily gather data that can bear on the issue of 'compositionality' in gesture.

For example, two people are standing looking at a mountain panorama. One is explaining the names of the mountains to the other. By extending his arm full length, with an index finger, he directs his recipient's attention to the various peaks. But as he does so, within the frame of each

successive pointing gesture, he moves his hand in a way that suggests now a curved contour, now a more jagged one. He thus combines depictive movement with pointing.

There may be restrictions on what can be combined with what. Thumb points are always to the side of the pointer, or behind him. They are not combined with depictive movements. The open flat hand with palm up may be used to point to someone, but it points not to him as an object but to him for what he stands for, for example it may to point him for what he has said. The open hand, palm held vertically, is commonly used when people are explaining paths of movement (giving directions of where to walk) and here depiction of movement path is combined with pointing action. However, an open hand with palm held facing downwards is not used for this purpose, etc.

We already know something of cultural differences in pointing gestures. Systematic analysis comparing data from one culture to another might be a good way to give precise illustration to cultural differences in gesture.

Discourse structure: Gesture phrases pattern with the stress and intonational structure of the speech they co-occur with in such a way as to have a visual rhythmic character that seems to mark out the rhythmic organization of the utterance. There is, thus, a dimension of discourse structure marking to be observed in all co-speech gestures. However, we do seem to find instances where the forms of the gesture phrases seem to pattern consistently with: aspects of discourse structure such as topic vs. comment; 'central' or 'logically crucial' topic, vs. topic against which it is being compared [For examples of this see Kendon 1995a].

Or a certain kind of spatialization of the gesture performance, so that different components of a discourse are given different spatial locations. In such cases we might speak of a form of deixis or pointing. It would be worthwhile collecting verbal expressions that reflect this sort of thing. For instance, we often say, in English "On the one hand, so-and-so, on the other hand, so-and-so" - and such a spatialized expression will be observed in co-occurring gesture, if there is any.

'Reality status': In conversations people quite often make statements for the sake of proposing something for discussion, not because they actually mean to report a real event; or the event they describe is being used to illustrate a point and it is not being related for its own sake. What is referred to in such speech can have a sort of 'provisional' status, an 'as if' status, a 'subjunctive' status. There may be gestural ways in which such statuses of something being said is indicated.

According to some current observations, looking at a conversation recorded near Salerno, presenting the hand, palm up seems to mark what is said as an "example" as an "opinion" as an "illustration"

Also in this material I have instances of a conventionalized form being used as a way of indicating that what is being said is only to be read as "an idea" or "what one might think" not what the speaker believes to be the case.

Speech-act marker gestures: Examples in Kendon (1995a) are described of gestural forms that appear to be used as a way of marking an utterance as an appeal, a question, etc.

One might speak of this aspect of gesture as 'rhetorical' because it was this aspect of gesture that was so extensively considered by Quintillian and also by the 17th and 18th century treatises on the "art of gesture".

Interaction regulation: Another aspect of gesture use has to do with regulating the organization of the interaction. People use gesture to indicate to a speaker that he should stop talking, to 'push away' what another is saying, to indicate they want the next turn, to show they think the discussion should stop, and the like. Of course, insofar as gestures may indicate type of speech act, 'reality status' of what is being said, even exposition of content, they play a part in the structuring of the conversation, however there do appear to be sets of gestures that people may use that are rather more specialized as interactional regulatory gestures.

Two points to be stressed: What I have said here is, of course, but an indication of some of the different ways in which gesture is employed by speakers. I do this because I think that any gesture project must recognize these multiple functions and an important component of what it should be engaged in is to map these out. There is great complexity and subtlety here (see Calbris again).

Secondly, this is not meant to be even the beginnings of a typology. Rather, it is meant to suggest some of the various functional dimensions of an utterance to which gestures contribute. Gestures vary in the extent to which they are 'weighted' along each of these dimensions, so they vary in the position they would occupy in a multi-dimensional space (of course, we can - and Jakobson would - say exactly the same thing about the spoken component). Those gestures that consistently occupy extreme ends of these dimensions (with little weighting on the others) get distinguished as "types" - but I don't think a typological way of thinking is very helpful. Rather, it tends to obscure the complexity and subtlety.

E. The significance of gesture

My approach to gesture starts from the position that gestures, like spoken utterances, are voluntary actions. They are not like emotional reactions and they are not like digestion or breathing. People engage in gesture, as they engage in speech, as part and parcel of their effort to "say something", to engage in some sort of social action, to play their part in an explicit, willing, fashion in the give and take of social interaction.

Questions remain, however: what level of control guides gesture? to what extent do they count in conveying what a person is saying to others? and when, as appears to be the case, gestures appear even when the addressee can't be seen by the speaker, do they nevertheless play a role for the gesturer himself?

It seems clear that there can be no simple answer to any of these questions.

Level of control: This would include the issue of "consciousness". Personally, I am not sure how important this is. It is true that if you ask someone what gesture they just performed when in full rhetorical flight the chances are they will not be able to tell you and may even claim they didn't gesture.

But this may be just because, in our society, most of the time, we don't pay separate attention to gesture and therefore we don't monitor it in such a way that would allow us to recall just what we did. Exactly the same might be tried asking people to repeat, without warning, what they just said in speech. The chances are that they would give you the sense of what they said, but rarely the exact words.

I think if experiments along these lines were conducted, exact words uttered would tend to be more recallable than exact gestures. But once people had their attention drawn to gestures they could begin to recall them much as they could recall their words, at least some of the time.

And some gestures would be much more readily recalled than others. The more recallable, the more conventionalized.

Because (according to me) gestures are an integral part of the enterprise of the utterance, they are no more (or less) recallable than, say, the movements we make with our legs and our bodyas we sit in a chair or as we get up. We will readily report that we "got up", and the like, but the exact details of how we did this we don't recall, as a rule. In the same way, we may readily recall that we "said so-and-so" but we won't recall exactly how we did so (as a rule), and this applies to gestures as well as to words. Thus the alleged "unconsciousness" of gesture is not special to gesture, but applies to all voluntary activity (including speaking - it only doesn't seem to apply here for two reasons: 1. we get almost immediate feedback in the same channel of production - we hear what we say. 2. Because speech has a special status in our society and therefore, in certain circumstances, at least, words uttered become specially important. If gestures 'uttered' had a special importance - as they did in legal contexts in the Middle Ages - see Schmitt 1990; Hibbitts 1992 - then they would also be recalled). What we are conscious of, and what we can tell other people about, is what we are attending to and what we are aiming to do. Attention to how we do these things is not usual, however it does occur, of course, and we can train ourselves to attend to our own actions in this manner. The degree to which people are conscious of and able to report about how they do what they do will vary individually, from moment to moment, and perhaps there are cultural differences, also. For example, I have the strong impression that Southern Italians are much more willing and able to tell you about their gestures than Englishmen are (in large part, it is not that Englishmen gesture less than Italians as it is that English culture teaches one to disattend gesture - in consequence Englishmen believe they do not gesture much).

Conveying information to others: Obviously, this is a very important question. There are great methodological difficulties attending its investigation because, in everyday interaction, people don't respond to gesture separately, they take it in as part of a complete package. Krauss et al. 1991 report an experiment in which an attempt was made to see if 'conversational gestures' convey any information in their own right about what the speaker was saying. In this experiment only the gestures that people made in the course of speaking were shown to panels of judges. However, speakers divide what they have to 'say' between gesture and speech and co-speech gestures are not 'designed' to be understood separately from the speech they are associated with. Krauss and his colleagues, in a sense, were testing the hypothesis that they might be, but this was really an inappropriate hypothesis. Actually they did find consistencies in judgments of meaning

and showed that such gestures do convey information - albeit (and not surprisingly, given the character of his experiment) of a very general kind.

See Kendon (1994) for what I have said about this issue in the past and for a review of relevant experiments and other studies on this problem.

Gestures for the benefit of the gesturer: Some investigators seem to think that this is all gestures are good for. I do not agree with these people, however. Just as it is sometimes helpful to say something outloud to oneself, so it may very well be useful to gesture to oneself. You get a feel for what it is you are thinking about, a sense of how something might look, etc.

F. Gesture and Situation

Insofar as gesture is an integral part of the 'enterprise of utterance' and insofar as the kinds of utterances people produce, the 'register' they employ, and so forth, varies with the 'situation', so we should expect there to be significant variation in how gesture is employed in one situation as compared to another.

At a macroscopic level, anyone setting out to collect material relevant to a study of how gesture is used in everyday life should seek to sample diverse kinds of interactions. Lamedica (1987) compared different kinds of public speakers and showed they used gesture differently according to whether they were a politician, a preacher, a university lecturer, and so on. His is the only study I know of that is like this: that suggests that different kinds of speaking tasks will entail not only different kinds of topic, kinds of presentation of material, but different kinds of gesture usage.

Obviously, situations can be compared on numerous dimensions (Goffman's discussion of 'social occasions' has always seemed to me to be especially useful as a starting point - see Goffman 1954, 1963) and just as work has been done that bears on how speakers adapt theirlanguage, mode of speaking, and the like, according to situation, so studies of this sort ought to be expanded to include gesture.

At a microscopic level one should incorporate the analysis of gesture into the analysis of conversational structure. As people like Schegloff, Goodwin, and so on have shown, speakers are very adept at adapting their utterances to the momentary needs of the conversational circumstance. This has been called 'recipient design'. We may expect this to extend to gesture. Indeed, we can find highly suggestive examples.

Thus, in the Italian conversations I have been studying, one finds instances of a speaker re-stating something, for example first for the benefit of one specific recipient, then for the benefit of the wider group - he designs his utterance differently in each case, and this includes the way he uses gesture. Examples of this sort (to me, at least) are convincing evidence for the view that gesture is part of a speaker's resource deployment as he hones his utterance to the demands of circumstance. Close comparative analysis of examples of this sort of thing ought eventually to lead us to a more refined understanding of what role gesture is playing in the interaction.

G. Gesture, Language and Culture

That there are cultural differences in gesture is well known but there is little in the way of detailed documentation. Efron (1972) still remains the most thorough demonstration. The issue of whether the differences he observed (between Italian speakers and speakers of Yiddish) are to be attributed to differences in language or culture or both were not addressed by him, however.

Birdwhistell (1970) maintained that there would certainly be kinesic differences that might be related language differences. Creider (1986) offered some intriguing observations on gesture differences between speakers of different East African languages. The work mentioned above, in which gesture phrasing is examined in detail in relation to the phrasing of speech should obviously be done cross-linguistically to establish to what extent patterns established in English are found in speakers of other languages or whether, for instance, differences in phrasal organization (stress-timed vs. syllable timed languages, etc.) make a difference.

The detailed study of narrations of comparable material by speakers of different languages, such as Sotaro Kita (1993) and others are pursuing (e.g. Müller 1994), is clearly of great relevance to the issue of the nature of the interface between gesture and language. Issues of word order and gestural organization also need to be pursued.

Among the differences reported by Efron between Italians and Yiddish speakers was that the Italians used an extensive vocabulary of 'symbolic gestures', whereas the Yiddish speakers did not. A difference of this sort suggests that part of the difference perhaps lies in what communicative circumstances prevail commonly for the Italians as compared to the East European Jews which leads to favouring differently the different uses of gesture. For example, gesture as a means of communication has a number of properties, such as silence, ability to transmit over long distances, ability to be used in a concealed manner, ability to use it for one interchange while carrying on with another, and so forth, that may make its elaboration highly adaptable in certain circumstances. It may be that in traditional Italian urban culture or, more specifically, in the culture of Naples (where gesture use is especially rich), the ecology of everyday interaction is such that it particularly favours the use of gesture. Ideas along these lines as they apply to the situation in Naples I have briefly alluded to in Kendon (1995b). See also the discussion in Chapter 14 of Kendon (1988). This suggests that comparative micro-ecological studies of interactional occasions would be highly useful.

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Calbris, G. (1990) *Semiotics of French Gesture.* Bloomington: Indiana University Press.

Creider, C. A. (1986) "Interlanguage comparisons in the study of the interactional use of gesture." In *Semiotica* 62(1/2):147-163.

Crystal, D. and Davy, D. (1969) *Investigating English Style.* London: Longmans and Co.

de Jorio, Andrea (1832) *La mimica degli antichi investigata nel gestire napoletano.* Naples: Fibreno.

Efron, D. (1972) *Gesture, Race and Culture.* The Hague: Mouton & Co.

Ekman, Paul , and Wallace Friesen (1969) "The repertoire of non-verbal behavior: Categories, origins, usage and coding." In *Semiotica* 1(1):49-98.

Goffman, E. (1954) *Communcation conduct in an island community.* University of Chicago Doctoral Dissertation.

Goffman, E. (1963) *Behavior in public places.* New York: The Free Press of Glencoe.

Goodwin, M. H., & Goodwin, C. (1986) "Gesture and co-participation in the activity of searching for a word." In *Semiotica* 62(1/2), 51-75.

Hibbitts, Bernard J. (1992) "Coming to our senses: Communication and legal expression in performance cultures." In *Emory Law Journal* 41(4):873-960.

Jakobson, R. (1960) "Closing Statement: Linguistics and Poetics." In T.A. Sebeok, ed., *Style in Language.* Cambridge, Mass.: MIT Press, 350-377.

Johansson, G. (1973) "Visual perception of biological motion and a model for its analysis." In *Perception and Psychophysics* 14: 201-211.

Kendon, A. (1972) "Some relationships between body motion and speech. An analysis of an example." In *Studies in Dyadic Communication.* A. Siegman and B. Pope, eds. Pp. 177-210. Elmsford, New York: Pergamon Press.

--- (1980) "Gesticulation and speech: two aspects of the process of utterance." In *The Relationship of Verbal and Nonverbal Communication.* M.R. Key, ed. Pp. 207-227. The Hague: Mouton and Co.

--- (1981) "Geography of gesture." In *Semiotica* 37(1/2):129-163.

Kendon, Adam (1982) "The study of gesture: Some observations on its history." In *Recherches Sémiotiques/Semiotic Inquiry* 2(1):45-62.

--- (1985) "Behavioural foundations for the process of frame attunement in face-to-face interaction." In *Discovery Strategies in the Psychology of Action.* G.P. Ginsburg, M. Brenner, and M. von Cranach, eds, Vol. 229-253. London: Academic Press.

--- (1988) *Sign Languages of Aboriginal Australia: Cultural, Semiotic and Communicative Perspectives.* Cambridge: Cambridge University Press.

--- (1990) *Conducting Intraction.* Cambridge: Cambridge University Press.

--- (1993a) "Space, time and gesture." In *Degrès* (74):3a-16a.

---(1993b) "Human gesture." In *Tools, Language and Cognition in Human Evolution.* K.R. Gibson and T. Ingold, eds. Pp. 43-62. Cambridge: Cambridge University Press.

--- (1994) "Do Gestures Communicate? A Review." In *Research on Language and Social Interaction* 27(3):175-200.

--- (1995a) "Gestures as illocutionary and discourse structure markers in Southern Italian conversation." In *Journal of Pragmatics* 23(3):247-279.

--- (1995b) "Andrea De Jorio - The first ethnographer of gesture?" In *Visual Anthropology* 7: 375-394.

Kita, Sotaro (1993) *Language and thought interface: A study of spontaneous gestures and Japanese mimetics,* Department of Psychology, University of Chicago.

Krauss, R. M., P. Morrel-Samuels, and Christina Colasante (1991) "Do conversational gestures communicate?" In *Journal of Personality and Social Psychology* 61(5):743-754.

Lamedica, N. (1984) "Gesto e linguaggio nel discorso in pubblico." In P. E. Ricci-Bitti, ed. *Comunicazione e Gestualità.* Milan: Franco Agnelli.

McClave, Evelyn Zebrowski (1991) *Intonation and Gesture.* Ph. D., Linguistics, Georgetown University.

McNeill, D. (1992) *Hand and Mind.* Chicago: Chicago University Press.

Michotte, A. E. (1950) "The emotions regarded as functional connections." In *Feelings and Emotions.* M.L. Reymert, ed. New York: McGraw Hill.

Morris, D., et al. (1979) *Gestures: Their Origins and Distribution.* London: Jonathan Cape.

Müller, Cornelia (1994) "Semantic structure of motional gestures and lexicalization patterns in Spanish and German descriptions of motion-events." In *CLS 30: Papers from the 30th Regional Meeting of the Chicago Linguistic Society,* Chicago, Illinois, 1994. Vol. 30, pp. 281-295. Chicago Linguistic Society.

Nobe, S. (1996) *Cognitive Rhythms, Gestures and Acoustic Aspects of Speech.* Ph. D., Department of Psychology, University of Chicago.

Payrató, Lluís (1993) "A pragmatic view on autonomous gestures: A first repertoire of Catalan emblems." In *Journal of Pragmatics* 20:193-216

Radutzky, Elena (1992) *Dizionario bilingue elementare della lingua italiana dei segni.* Rome: Edizioni Kappa.

Rimé, B., and L. Schiaratura (1991) "Gesture and speech." In *Fundamentals of Nonverbal Behavior.* R.S. Feldman and B. Rimè, eds. Pp. 239-281. Cambridge: Cambridge University Press.

Schegloff, E.A. (1984) "On some gestures' relation to talk." In *Structures of Social Action: Studies in Conversation Analysis.* J.M. Atkinson and E. J. Heritage, eds. Pp. 266-296. Cambridge: Cambridge University Press.

Schmitt, Jean-Claude (1990) *Il gesto nel medioevo* (Italian translation of *La raison des gestes dans l'Occident médiéval.* 1990. Paris: Gaillmard). Rome: Laterza.

--- (1984) "Introduction and general bibliography." In *History and Anthropology* 1(1):1-28.

--- (1990) *Il gesto nel medioevo* (Italian translation of La raison des gestes dans l'Occident médiéval. 1990. Paris: Gaillmard). Rome: Laterza.

Sherzer, J. (1991) "The Brazilian thumbs-up gesture." In *Journal of Linguistic Anthropology* 1(2):189-197.

--- (1993) "Pointed lips, Thumbs up, and Cheek Puffs: Some Emblematic Gestures in Social Interactional and Ethnographic Context." In *SALSA I:*196-211.

Volterra, Virginia, ed. (1987) *La Lingua Italiana dei Segni: La comunicazione visivo-gestuale dei sordi.* Bologna: Il Mulino.

Webb. Rebecca (1995) "Linguistic properties of metaphoric gestures." In Dissertation Proposal. Department of Linguistics and Department of Brain and Cognitive Sciences, University of Rochester, Rochester, New York.

Adam Kendon studied biological sciences and social psychology at the universities of Cambridge and Oxford. He has taught at Oxford, Cornell, Connecticut College and the University of Pennsylvania and has held research posts in Pittsburgh, New York, Canberra,

Bloomington, Philadelphia and Nijmegen. He is currently a Visiting Professor at the Istituto Universitario Orientale in Naples. In his research he has been interested in the analysis of communication conduct in face-to-face interaction (see his *Conducting Interaction,* Cambridge University Press 1990) and, more recently, in the study of gesture. After completing a major piece of work on the sign languages in use among the Australian Aborigines (see his *Sign Languages of Aboriginal* Australia, Cambridge University Press 1988), he has turned to studies of gesture in Southern Italy. Most recently he has published 'Gestures as illocutionary and discourse structure markers in Southern Italian Conversation' (*Journal of Pragmatics* , 1995) and 'Andrea de Jorio - the first ethnographer of gesture?' (*Visual Anthropology* 1995). His work has received support from the National Science Foundation, the Wenner-Gren Foundation for Anthropological Research and the Istituto Italiano per gli studi filosofici of Naples, and he has been a Fellow of the John Simon Guggenheim Memorial Foundation of New York.

adamk@nwfs.gse.upenn.edu

Some items for an introductory bibliography of gesture studies.

compiled by Adam Kendon

This bibliography is meant as a guide for someone interested in becoming acquainted with the literature in gesture studies. Most of the items included contain large bibliographies. It is organized topically. Since some items listed pertain to more than one topic, duplicate entries appear occasionally. To skip to a particular section of the bibliography, simply click on a topic below. To return to this point in the article, use the "Back" function of your browser.

- History of Gesture and History of Gesture Studies
- Studies of the relationships between gesture and speech
- Functions of gesture in interaction and the problem of their communicative import
- Studies of conventional gestures and conventionalization in gesture
- Gesture in independence from speech: Sign languages primary and alternate and Gesture Systems

History of Gesture and History of Gesture Studies

Austin, Gilbert (1802). *Chironomia or, a Treatise on Rhetorical Delivery.* London: Cadell andDavis. [Reprinted in 1966 by Southern Illinois University Press, Carbondale and Edwardville, Illinois. Edited with a Critical Introduction by Mary Margaret Robb and Lester Thonssen].
[A textbook, highly influential in the last century, which contains a comprehensive presentation of the tradition of 'chironomia' (the art of gesture) as it extends from Quintilian to the end of

eighteenth century. It also contains Austin's own notation system, which is highly insightful and could be useful for modern researchers].

Bremmer, J. and Roodenburg, H. (eds). (1991) *A Cultural History of Gesture.* Cornell University Press.
[An extremely interesting collection of essays on different aspects of gesture and how it has changed over the course of history within Europe].

De Jorio, Andrea (1832). *La mimica degli antichi investigata nel gestire napoletano.* Napoli: Fibreno
[Available in an anastatic reprint from Arnaldo Forni, Bologna. See Kendon 1995, below, for an account of this work].

Efron, David (1972). *Gesture, Race and Culture.* The Hague: Mouton and Co. [Originally published in 1941 by Kings Crown Press, New York].
[A classic study of central importance in the development of modern gesture studies].

Hibbitts, Bernard J. (1992). "Coming to our senses: Communication and legal expression in performance cultures." In *Emory Law Journal,* 41: 873-960.
[A highly interesting discussion of the way ritualized gesture played a central role in legal transactions before comprehensive literacy].

Kendon, A. (1982). "The study of gesture: Some observations on its history." In *Recherches Sémiotiques/Semiotic Inquiry,* 2(1), 45-62.
[An attempt to explain why the study of gesture languished from the end of the nineteenth century until the beginning of the 1980s, despite the explosion of 'nonverbal communication' studies from 1955 onwards].

--- (1995). "Andrea De Jorio - The first ethnographer of gesture?" In *Visual Anthropology,* 7: 357-374.

Knowlson, J. R. (1965). "The idea of gesture as a universal language in the 17th and 18th centuries." In *Journal of the History of Ideas,* 26(495-508).

Schmitt, J-C. (1990). *La raison des gestes dans l'Occident médiéval.* Paris: Gaillmard.
[An important study of the role of gesture in medieval society, especially in religious contexts].

--- (1984). "Introduction and general bibliography." In *History and Anthropology,* 1(1), 1-28.
[A brief but valuable survey of the history of the study of gesture. Contains a useful bibliography].

--- (1992). "The rational of gestures in the West. A history of from the 3rd to the 13th Centuries." In F. Poyatos, ed.*Advances in Nonverbal Communication.* Amsterdam and Philadelphia: John Benjamins, pp. 77-95.
[Summarizes the main conclusions of La raison des gestes].

Siegel, J. P. (1969). "The Enlightenment and the evolution of a language of signs in France and England." In *Journal for the History of Ideas*, 30, 96-115.

Tylor, Edward B. (1865). *Researches into the Early History of Mankind and the Development of Civilization.* London: John Murray.
[The first five chapters deal with language and discuss gesture, gesture as used by the deaf, picture writing, and spoken language].

Wundt, Wilhelm (1973). *The Language of Gestures.* Translated from Wundt, W. Völkerpsychologie: Eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte. Volume 1, Part 1, Chapter 2 (Stuttgart: Alfred Kröner Verlag) by Thayer, J. S., Greenleaf, C. M. and Silberman, M. D. The Hague: Mouton

Studies of the relationships between gesture and speech

Birdwhistell, R. L. "Body motion accompaniments to spoken American English." In R. L. Birdwhistell, *Kinesics and Context.* Philadelphia: University of Pennsylvania Press, 1970.
[An early summary of observations making clear the systematic nature of body-motion as it co-occurs with speech. The book Kinesics and Context collects all of Birdwhistell's important writings on kinesics and it is a landmark in the modern ethnographic study of gesture].

Feyereisen, Pierre, and Jaques-Dominique de Lannoy (1991). *Gestures and Speech: Psychological Investigations.* Cambridge: Cambridge University [Contains a very large bibliography].

Freedman, N. (1972). "The analysis of movement behavior during the clinical interview." In *Studies in Dyadic Communication.* A.W. Siegman and B. Pope, eds. Pp. 153-175. New York: Pergamon Press.

--- (1977). "Hands, words and mind: On the structuralization of body movements duringdiscourse and the capacity for verbal representation." In *Communicative Structures and Psychic Structures: A Psychoanalytic Approach.* N. Freedman and S. Grand, eds. Pp. 109-132. New York and London: Plenum Press.
[This is a good survey of Norbert Freedman's work which well repays study. He is the only researcher to my knowledge who has attempted to examine systematically the occurrence of both self-touching movements and gesticulations in relation to spoken discourse].

Kendon, A. (1972). "Some relationships between body motion and speech. An analysis of an example." In *Studies in Dyadic Communication.* A. Siegman and B. Pope, eds. Pp. 177-210. Elmsford, New York: Pergamon Press.

--- (1980). "Gesticulation and speech: two aspects of the process of utterance." In *The Relationship of Verbal and Nonverbal Communication.* M.R. Key, ed. Pp. 207-227. The Hague: Mouton and Co.
[Contains the development of the terminology of 'gesture phrase', with its components

'preparation', 'stroke', 'recovery' and to demonstrate the heirarchical or multiple-level organization of gesticulation].

--- (1983). "Gesture and speech: How they interact." In *Nonverbal Interaction.* J.M. Wieman and R.P. Harrison, eds. Pp. 13-45. Beverly Hills, California: Sage Publications.
[A comprehensive review up to 1982].

--- (1993). "Human gesture." In *Tools, Language and Cognition in Human Evolution.* K.R. Gibson and T. Ingold, eds. Pp. 43-62. Cambridge: Cambridge University Press.

McNeill, D. (1985). "So you think gestures are nonverbal?" In *Psychological Review* 92:350-371.
[This paper presents McNeill's ideas in a relatively brief form and is still valuable as an introduction].

--- (1992). *Hand and Mind.* Chicago: Chicago University Press.

Morrel-Samuels, Palmer, and Robert M. Krauss (1992). "Word familiarity predicts temporal asynchrony of hand gestures and speech." In *Journal of Experimental Psychology: Learning, Memory and Cognition* 18(3):615-622.

Rimé, B., & Schiaratura, L. (1991). "Gesture and speech." In R. S. Feldman & B. Rimé (Eds.), *Fundamentals of Nonverbal Behavior,* (pp. 239-281). Cambridge: Cambridge University Press.
[Contains a useful summary of the theories of gesture-speech relationships of Norbert Freedman, David McNeill and Adam Kendon and a presentation of Rimé's own views].

Functions of gesture in interaction and the problem of their communicative import.

Atkinson, M. and Heritage, John, eds. (1984). *Structures of Social Action.* Cambridge: Cambridge University Press.
[This is an excellent anthology of work in the tradition of Conversation Analysis. Papers that deal with gestures include E. Schegloff "On some gestures' relation to talk" and C. C. Heath "Talk and recipiency: sequential organization in speech and body movement"]

Fornel, Michel de (1992). "The return gesture: some remarks on context, inference and iconic gesture." In Peter Auer and Aldo di Luzio, eds. *The Contxtualization of Language.* Amsterdam: John Benjamins, pp. 159-176.

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers.* New York: Academic Press.
[Although not primarily concerned with gesture, is important because of its view of conversational organization and the role of posture and orientation in this].

Goodwin, C. (1986). "Gesture as a resource for the organization of mutual orientation." In *Semiotica* 62(1/2):29-49.
[Among other things this is valauble for the clear presentation of the methodological difficulties attendant on the study of the role of gesture in interaction].

Goodwin, Charles, and Marjorie Harkness Goodwin (1992). "Context, activity and participation." In *The Contextualization of Language.* P. Auer and A. di Luzio, eds. Amsterdam: Benjamins.

--- (1986). "Gesture and co-participation in the activity of searching for a word." In *Semiotica* 62(1/2):51-75.

Haviland, J. B. (1993). "Anchoring, Iconicity and Orientation in Guugu Yimithirr Pointing Gestures." In *Journal of Linguistic Anthropology,* 3(1), 3-45.

Heath, C. C. (1986). *Body movement and speech in medical interaction.* Cambridge: Cambridge University Press.
[An exceptionally valuable study demonstrating how an integrated approach to interaction can be accomplished. Follows an orientation heavily informed by ConversationAnalysis].

Heath, Christian (1992). "Gesture's discrete tasks: Multiple relevancies in visual conduct in the contextualization of language." In *The Contextualization of Language.* P. Auer and A. di Luzio, eds. Pp. 102-127. Amsterdam/Philadelphia: John Benjamins.

Kendon, A. (1985). "Some uses of gesture." In D. Tannen & Muriel Saville-Troike (Eds.), *Perspectives on Silence,* (pp. 215-234). Norwood, N. J.: Ablex Publishing Corporation.

--- (1994). "Do Gestures Communicate? A Review." In *Research on Language and Social Interaction,* 27(3): 175-200.
[This article should be useful for those who want to know the 'lay of land' on this issue].

--- ed. (1994). "Special Issue: Gesture and Understanding in Social Interaction." In *Research on Language and Social Interaction,* 27 (3): 171-267

--- (1995). "Gestures as illocutionary and discourse structure markers in Southern Italian conversation." In *Journal of Pragmatics,* 23, 1-31.

Krauss, R. M., Morrel-Samuels, P., & Colasante, C. (1991). "Do conversational gestures communicate?" In *Journal of Personality and Social Psychology,* 61(5), 743-754.

Sherzer, J. (1972). "Verbal and nonverbal deixis: the pointed lip gesture among the San Blas Cuna." In *Language in Society,* 2(1), 117-131.

--- (1991). "The Brazilian thumbs-up gesture." In *Journal of Linguistic Anthropology,* 1(2), 189-197.

--- (1988). "The significance of gesture: how it is achieved." In *Papers in Pragmatics*, 2: 60-83.

--- (1992). "Previews: gestures at the transition place." In P. Auer & A. d. Luzio (Eds.), *The Contextualization of Language*, (pp. 135-157). Amsterdam/Philadelphia: John Benjamins.

--- (1993). "Gesture as Communication I: Its Coordination with Gaze and Speech." *Communication Monographs*, 60(4), 275-299.

--- (1994). "Gesture as communication II: The audience as co-author." In *Research on Language and Social Interaction*, 27(3), 239-267.

Studies of conventional gestures and conventionalization in gesture.

Calbris, G. (1990). *Semiotics of French Gesture.* Bloomington: Indiana University Press.
[The first two chapters of this book present cross-cultural judgement studies of French 'emblems' presented in 'citation' context. The remainder of the book is a highly innovative analysis of the semiotic properties of gesture - based mainly on 'naked eye' observations in a wide variety of situations. For an extended discussion of this book see Kendon, A. (1992). *Abstraction in gesture.* Semiotica, 90: 225-250].

Driessen, H. (1991). "Gestured masculinity: body and sociability in rural Andalusia." In J. Bremmer & H. Roodenburg (Eds.), *A Cultural History of Gesture*, (pp. 237-249). Ithaca, New York: Cornell University Press.

Efron, D. (1972). *Gesture, Race and Culture.* The Hague: Mouton & Co.

Ekman, Paul , and Wallace Friesen (1969). "The repertoire of non-verbal behavior: Categories, origins, usage and coding." In *Semiotica* 1(1):49-98.
[A classic and much-cited paper. The typology established here, derived from David Efron, has been extremely influential].

Kendon, A. (1981). "Geography of gesture." In *Semiotica*, 37(1/2), 129-163.
[An essay Morris, et al.'s Gestures: Their origin and distribution].

--- (1984). "Did gesture have the happiness to escape the curse at the confusion of Babel?" In A. Wolfgang (Ed.), *Nonverbal Behavior: Perspectives, Applications, Intercultural Insights*, (pp. 75-114). Lewiston, New York: C. J. Hogrefe.
[A comprehensive rerview of cultural comparative studies of gesture].

--- (1992). "Some recent work from Italy on quotable gestures ('emblems')." In *Journal of Linguistic Anthropology*, 2(1), 72-93.

Meo Zilio, Giovanni, and Silvia Mejia (1980-1983). *Diccionario de Gestos: España e Hispanoamérica.* 2 vols. Volume 1 (1980), 2 (1983). Bogot‡: Instituto Caro y Cuervo.

Morris, D., Collett, P., Marsh, P., & O'Shaughnessy, M. (1979). *Gestures: Their Origins and Distribution.* London: Jonathan Cape.
[An attempt to survey the meaning and use of twenty symbolic gestures in Westrn Europe. Despite methodological shortcomings, and although they require some care in their interpretation, the findings are of considerable interest . Containsmuch interesting material on the history of the gestures studied. It has a very useful bibliography. See Kendon's 'Geography of gesture' (1981) for an extended discussion]

Payrató, L. (1993). "A pragmatic view on autonomous gestures: A first repertoire of Catalan emblems." In *Journal of Pragmatics,* 20, 193-216.
[A useful study. The paper also includes a comprehensive bibliography].

Ricci Bitti, P. E., & Poggi, I. (1990). "Symbolic nonverbal behavior: talking through gestures." In R. S. Feldman & E. B. Rimé (Eds.), *Fundamentals of Nonverbal Behavior.* Cambridge: Cambridge University Press.

Saitz, Robert L., and Edward J. Cervenka (1972). *Handbook of Gestures: Columbia and the United States.* The Hague: Mouton and Co.

Sherzer, J. (1972). "Verbal and nonverbal deixis: the pointed lip gesture among the San Blas Cuna." In *Language in Society,* 2(1), 117-131.

--- (1991). "The Brazilian thumbs-up gesture." In *Journal of Linguistic Anthropology,* 1(2), 189-197.
[One of the very few studies of an 'emblem' in its contexts of use].

Sparhawk, C. M. (1978). "Contrastive-identificational features of Persian gesture." In *Semiotica,* 24(1/2), 49-86. [An interesting attempt to apply Stokoe's 'cheremic' analysis to a set of 'emblems' used in Persia].

Gesture in independence from speech: Sign languages primary and alternate and Gesture Systems.

Primary Sign Languages

The literature on primary sign languages (i.e. sign languages used in deaf communities) is now very large. I list only a few books which are good starting points and which contain useful further references.

Emmorey, Karen, and Judy Reilly, eds. (1995). *Language, Gesture and Space.* Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Friedman, L. H., ed. (1977). *On the Other Hand: New Perspectives on American Sign Language.* New York: Academic Press.

[A pioneering collection. Mandel's article on iconicity and conventionalization and De Matteo's article on the visuo-spatial dimensions of sign language are especially interesting].

Isenhath, John O. (1990). *The Linguistics of American Sign Language.* Jefferson, North Carolina: McFarland.
[A recent and clearly written survey of the main features of ASL lexicon, morphology, syntax. Contains a bibliography].

Klima, Edward A. and Bellugi, Ursula (1979). *The Signs of Language.* Cambridge, Mass.: Harvard University Press.
[Probably still the best book for anyone wishing to become introduced to the fundamentals of modern research on primary sign languages].

Kyle, Jim G. and Woll, Bencie (1985). *Sign Language: The Study of Deaf People and their Language.* Cambridge: Cambridge University Press.
[A useful introductory survey, covering applied aspects as well as theortical aspects. Emphasis is mainly on British sign language]

Siple, P. (editor). (1978). *Understanding Sign Language through Sign Language Research.* New York: Academic Press.
[An important collection of articles. Newport and Supalla's "How many seats in a chair?" is especially important for its pioneering insights into sign language morphology].

Stokoe, W.C. (1978). *Sign Language Structure.* Revised Edition. Silver Spring, Maryland: Linstok Press.
[This is a revision of Stokoe's pioneering analysis, originally published in 1960. The first attempt to develop a lingusitic analysis of a primary sign language using methods and concepts from Structural Linguistics. Stokoe was much influenced by Trager and H. L. Smith and W. A. Austin. It remains wll worth reading today].

Supalla, T. (1986). "The classifier system in American Sign Language." In *Noun Classes and Categorization.* C. Craig, ed. Pp. 181-215. Philadelphia: John Benjamins.

Volterra, Virginia, ed. (1987). *La Lingua Italiana dei Segni: La comunicazione visivo-gestuale dei sordi.* Bologna: Il Mulino.
[A pioneering collection of studies of Italian sign language. Makes interesting use of the 'semantic phonology' approach of Boyes-Braem].

Volterra, V. and Erting, C. J. (1990). *From gesture to language in hearing and deaf children.* Berlin: Springer-Verlag.
[A highly interesting collection that brings together work on the development ofsigning in very young deaf children and the development of gesture use in very young hearing children. Raises the issue of the differnces between 'gesture' and 'sign.']

Isolated primary sign languages ('Home sign systems')

Studies of isolated sign languages are comparatively rare. They have not attracted the degree of attention they deserve. Main studies are the following:

Goldin-Meadow, S, and C. Mylander (1990). "Beyond the input given: the child's role in the acquisition of language." In *Language* 66(2):323-355.
[This is a useful survey and presentation of Goldin-Meadow's work on sign systems 'created' by children born deaf who are raised by parents' choice withut sign language. Susan Goldin-Meadow has a very large bibliography].

Jepson, J. (1991). "Urban and rural sign language in India." In Language in Society 20:37-57.

Kendon, A. (1980). "A description of a deaf-mute sign language from the Enga Province of Papua New Guinea with some comparative discussion. Part I: The formational properties of Enga signs." In *Semiotica* 32:1-32; Part II: The semiotic functioning of Enga signs. *Semiotica* 32:81-117; Part III: Aspects of utterance construction. Semiotica 32:245-313.
[Descriptive analyses of a sign language used in the upper Lagiap valley in the Enga Province of Papua New Guinea as this could be derived from the signing of one deaf young woman and a hearing Enga who knew the sign language. Limited in ethnographic background but rich in the detail of the analysis].

Kuschel, Rolf (1973). "The silent inventor: the creation of a sign language by the only deaf mute on a polynesian island." In *Sign Language Studies* 3:1-27.

Washabaugh, W. (1986). *Five Fingers for Survival.* Ann Arbor: Karoma Publishers, Inc.
[An ethnographic and linguistic study of 'isolated' deaf on Providence Island in the Carribean].

Yau, Shun-chiu (1992). *Creations gestuelle et debuts du langage: Creation de langues gestuelles chez des sourds isoles.* Paris: Editions Langages Croisés.
[Reports studies of 'isolated' deaf signing from Canada and elsewhere. Includes interesting theoretical discussions and a very comprehensive bibliography].

Alternate sign languages & gesture systems

Systems of gesture developed among hearing people for use as an alternative to speech where speech is not possible either for environmental or ritual reasons or possibly (in the case of the Plains Indians of North America) because spoken languages are mutually unintelligible are here termed 'alternate sign languages.' 'Gesture systems' such as systems of gesture used in work environments are more limited. There is no sharp distinction to be drawn. References to both are included here.

Farnell, Brenda (1995). *Do You See What I Mean?: Plains Indian Sign Talk and the Embodiment of Action.* Austin: University of Texas Press.
[There is a CD-ROM published in parallel with this book which demonstrates the notation system used (Labanotation), shows several signed narratives, and demonstrates analyses].

Johnson, R. E. (1978). "A comparison of the phonological structure of two northwest sawmill languages." In *Communication and Cognition* 11:105-132.

Kendon, A. (1984). "Knowledge of sign language in an Australian Aboriginal community." In *Journal of Anthropological Research*, 40: 556-576.

--- (1988). Sign Languages of Aboriginal Australia: Cultural, Semiotic and Communicative Perspectives. Cambridge: Cambridge University Press.

--- "Signs in the cloister and elsewhere." In Semiotica, 1990, 79: 307-329.
[An essay review of Monastic Sign Languages, J. Umiker-Sebeok and T. A. Sebeok, eds., Mouton De Gruyter, 1987. Includes comparative discussion of monastic and other sign languages with Warlpiri sign langauge].

Mallery, G. (1972). *Sign Language among North American Indians Compared with that among Other Peoples and Deaf-Mutes.* The Hague: Mouton.
[Reprinted from the Smithsonian Institution publication of 1881. A classic work. Of considerable historical interest, and still useful today].

Meissner, M., and S.B. Philpott (1975). "The sign language of sawmill workers in British Columbia." In *Sign Language Studies*, 9: 291-308.
[The only comprehensive report on a 'workplace' sign system kown to me].

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