An Agenda for Gesture Studies

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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 expression 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 instructive discussion 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 body as 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; Hibbits 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 out loud 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 their language, 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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--- (1993a) "Space, time and gesture." In *Degrès* (74):3a-16a.


emblems." In *Journal of Pragmatics* 20:193-216


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.

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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


[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].


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].


onwards].


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].


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].


movements and gesticulations in relation to spoken discourse].


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].


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


Goodwin, C. (1986). "Gesture as a resource for the organization of mutual orientation." In Semiotica
[Among other things this is valuable for the clear presentation of the methodological difficulties attendant on the study of the role of gesture in interaction].


[An exceptionally valuable study demonstrating how an integrated approach to interaction can be accomplished. Follows an orientation heavily informed by Conversation Analysis].


[This article should be useful for those who want to know the 'lay of land' on this issue].


--- (1994). "Gesture as communication II: The audience as co-author." In *Research on Language and
Studies of conventional gestures and conventionalization in gesture.


[A classic and much-cited paper. The typology established here, derived from David Efron, has been extremely influential].

[An essay Morris, et al.'s *Gestures: Their origin and distribution*].

[A comprehensive rerview of cultural comparative studies of gesture].


[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]

[A useful study. The paper also includes a comprehensive bibliography].


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.


[An interesting attempt to apply Stokoe's 'cheremic' analysis to a set of 'emblem' in its contexts of use.


[Probably still the best book for anyone wishing to become introduced to the fundamentals of modern research on primary sign languages.]


[An useful introductory survey, covering applied aspects as well as theoretical aspects. Emphasis is mainly on British sign language]


[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.]


[This is a revision of Stokoe's pioneering analysis, originally published in 1960. The first attempt to
develop a linguistic 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 well worth reading today].


[A pioneering collection of studies of Italian sign language. Makes interesting use of the 'semantic phonology' approach of Boyes-Braem].

[A highly interesting collection that brings together work on the development of signing in very young deaf children and the development of gesture use in very young hearing children. Raises the issue of the differences 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:

[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 without sign language. Susan Goldin-Meadow has a very large bibliography].


[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].


[An ethnographic and linguistic study of 'isolated' deaf on Providence Island in the Caribbean].

[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.


[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].


[Reprinted from the Smithsonian Institution publication of 1881. A classic work. Of considerable historical interest, and still useful today].


[The only comprehensive report on a 'workplace' sign system kown to me].


[Reports recent experiments on how speakers, requestd not to use speech, can create something like a sign system within a very short space of time]


[Contains most of the published material on North American sign languages and almost all that had been published on Australian Aboriginal sign languages up to 1978. Mostly of historical interest. For Australian Aboriginal sign languages the standard reference is now Kendon (1988)].

69(4):683-715.
[Reports recent experiments on how speakers, requestd not to use speech, can create something like a
sign system within a very short space of time]

[Contains almost all of the known publications on this topic including the study by Barakat of the
Cistercian sign system in use in St. Joseph's Abbey, Massachusetts, which is the only study of a living
monastic sign language].

Wright, Cheryl (1980). *Walpiri Hand Talk*. Darwin: Northern Territory Government Department of
Education.
[A remarkable photographic dictionary of Warlpiri sign language recorded from Ali-Curung]
A gesture is a form of non-verbal communication or non-vocal communication in which visible bodily actions communicate particular messages, either in place of, or in conjunction with, speech. Gestures include movement of the hands, face, or other parts of the body. Gestures differ from physical non-verbal communication that does not communicate specific messages, such as purely expressive displays, proxemics, or displays of joint attention. Gestures allow individuals to communicate a variety of Part IV: Gestural Systems and Sign Language. J.L. Singleton, S. Goldin-Meadow, D. McNeill, The Cataclysmic Break Between Gesticulation and Sign: Evidence Against a Unified Continuum of Gestural Communication. J.P. Morford, J.L. Singleton, S. Goldin-Meadow, The Genesis of Language: How Much Time Is Needed to Generate Arbitrary Symbols in a Sign System? T. Supalla, R. Webb, The Grammar of International Sign: A New Look at Pidgin Languages. Part V: Language Acquisition and Gesture. R.I. Mayberry, Mental Phonology and Language Comprehension, or What Does That Sign Mistake Mean? V. Volterra, J.M. Ives... An Agenda for Gesture Studies. Adam Kendon. 2007. Gesture, Language and Culture. References. Some items for an introductory bibliography of gesture studies. 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. 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.