

DISCUSSION OF 'WORDS AND GRAPHS'

William Stokoe started a quiet revolution in 1960 when he first demonstrated to the linguistic community that a sign language used by Deaf people was not a speech surrogate or a secondary code but a fully grammaticalized discursive system--a natural human language. His seminal work inspired a flourishing subfield of sign language linguistics, psycho-linguistics and socio-linguistics on an international scale, and we are both honored and delighted to welcome Dr. Stokoe to the pages of JASHM.

Persistent Problems

Despite the subsequent emergence of a sign language linguistics, however, Trager's conservative response to which Stokoe refers (*infra* p. 45), remains typical thirty five years later. It seems to be the case that sign languages have been dismissed by most linguists on the grounds that they are special cases for special populations. Linguistic communities who are especially skilled in such practices--Plains Indians, Aboriginal Australians, and the world's Deaf communities, for example--are kept well distanced as Other through tropes such as "handicapped" and "primitive". Despite the glaringly obvious empirical fact that people everywhere use vocal signs and action signs simultaneously (except perhaps academics of Anglo-Saxon descent in formal contexts), any deeper theoretical ramifications and potential disruptions that the inclusion of a visual/kinesthetic modality would bring to the smooth surface of linguistic science have been largely ignored. The assumption among most linguists is that vocal material is the basis of natural languages and only vocal material should be the basis of theorizing about them.

For example, in the most recent edition of John Lyons' classic text, *Language and Linguistics: An Introduction*, the author finds nothing wrong with the suggestion that,

... 'sign language', 'body language' or the 'language of bees' would be considered by most people as a metaphorical use of the word 'language' (Lyons 1981: 2).

Likewise in the introduction to the 1994 edition of Clark, Eschoiz and Rosa's textbook, *Language: Introductory Readings*, there is a subsection entitled "Non-Languages" which states:

Other kinds of human communication [besides speech] are sometimes called language: body language, or kinesics, is one example. The way we use our bodies in

sitting, standing, walking, is said to be expressive of things we do not say. It probably is but that does not make it language (Bolton in Clark, Escholz and Rosa eds., 1994: 6-7).

This naive restatement of a popular pseudo-psychological model of "body language" in a college textbook reveals the depth of the problem. The assumptions behind this statement are that physical action is purely instrumental and/or the universal direct external expression of internal feelings—a kind of natural emotional incontinence. In such a model, sign languages, or gestures of the hands and arms that accompany or alternate with speech, can fulfill, at best, only a limited expressive function that is separate from speech: body movement is to nature as speech is to culture.

Disciplinary boundaries and ethnocentrism aside, the meta-theoretical source of this problem of recognition for signed languages and co-expressive vocal-gestural systems is the dominant disembodied Western (i.e. European and derived) model of what counts as "language" (Farnell 1995). Mind/body dualism, often called Cartesian after the French philosopher René Descartes although its deeper roots lie in Platonic Greek philosophy, separates mind (as rational, thinking and non-material) from body (as irrational, mechanical, sensate matter). Mind/body dualism also entails a host of other familiar but equally problematic and hierarchical epistemological oppositions such as those between thinking and feeling, rational and emotional, mental and behavioral, and subjective and objective (Farnell 1994). Equally problematic, and presupposed by these Cartesian dualisms, is an individualistic solipsism that has created a discourse about persons which separates "inside" from "outside", and subsequently "verbal" (as private, located inside the head) from "non-verbal" (public, on the surface of the visible body).¹

Different Perspectives

I refer to such meta-theoretical concerns here because they are central to understanding some fundamental theoretical differences between approaches to the study of language. For example, I reject the Cartesian individualism that lies at the core of a view of language as "internal," as "initiated in the brain" and as "expressions of [a] conceptual scheme" (p. 52). In contrast, I hold to the view that language is initiated in social contexts by persons engaged in communicative practices. As Coulter (1979) puts it "the brain is not an agent": brains enable, but *people act*. In other words, our biology is a condition of enablement but not a deterministic framework for mind. As human beings we are grounded in our biology but cannot be reduced to it,

nor are we determined by it. From an evolutionary perspective we are biologically preconditioned *for culture* and so we are necessarily socially constructed through a variety of semiotic practices into culturally and historically situated persons. As Varela puts it, we are social first and therefore psychological, not the reverse (1995: 237-8).

Linguistics and other branches of the social sciences have inherited an untenable Cartesian mentalism which takes it for granted that there are internal mental processes "behind" what people do. Typical of what Harré and Gillet (1994) have called the 'first cognitive revolution', such approaches assume an inner realm of psychological structures and hypothetical mental mechanisms that are located somewhere between neuro-physiology and the person. As 'ghosts in the machine' of the body, however, they are theoretically problematic because without genuine substance and therefore without agentic causal power (Varela 1995)².

The same Cartesian theory of mind has permitted the traditional focus of language studies to reside entirely in grammar as the "basic structure of language," (p. 48) to the virtual exclusion of the study of language-in-use as a semiotic practice integral to social action. Many contemporary linguistic anthropologists see in the former a very restricted notion of language (see Urciuoli 1996), although the Chomskian neo-Cartesian agenda still reigns supreme in most linguistic departments.

Perhaps too, it is the fundamental disjunction in Western thought between material and non-material which informs Stokoe's apparent desire to embrace the vocabulary of kinesiology and physiology. Paradoxically, he finds current studies of sign languages at the 'phonological' level confused because too involved in "splitting and re-splitting" unitary movements (p. 47). I must confess a failure to see the significance of Stokoe's remarks about the fact that one must temporarily engage in acts of the imagination that separate signs into components which appear simultaneously in practice. On the other hand, however, he seems to advocate anatomical terminology as the only mode of discourse that can "really" describe movement accurately, when such a move would only find us hopelessly bogged down in totally inappropriate levels of detail.

Any act of analysis involves taking apart entities that are more than the sum of their parts, and while one certainly would not want to see micro-analyses conducted devoid of theoretical purpose, neither is Ockham's razor a scientific law. Explorations to identify sets of distinctive features for ASL signs and to specify morphemic structure have been necessary and for the most part productive (see Wilbur 1987). I agree with Stokoe (1990), however,

that sign language analysts should be cautious about allowing spoken language theories to dominate their imaginations, nor should they be overly enamored by the scientific prestige accorded "grammatical" studies at the expense of socio-linguistic studies of deaf communities.

It is interesting to note that recent technological advances have made it possible for articulatory phoneticians to make moving 'x-ray' records of a person's vocal tract during acts of speaking. This means investigators can see inside the entire vocal tract from a lateral perspective and look at dynamic articulations--vocal gestures--free from the traditional dogma that defines phonemes as static, context free states of the vocal tract. During a presentation of his research at a recent conference,³ articulatory phonetician Studdert-Kennedy remarked that, ironically, this new technology has finally enabled spoken language linguists to catch up with sign language linguists, in the sense that they too can now study the movements that create speech visually, just as American Sign Language linguists have always been able to study the visual production of ASL signs. When it was suggested to him that surely anatomical terminology was now the best way to achieve accuracy, Studdert-Kennedy emphatically rejected the idea, noting that to do so would only result in a plethora of data that was inappropriate to the theoretical task at hand. Articulatory phoneticians and sign language linguists thus recognize that phonological and kinological investigations, even at the most detailed levels of simultaneous distinctive feature analysis, however defined⁴ require working with units of analysis ontologically distinct from 'muscular movements'.

Words

Stokoe seems to have difficulty imagining how movement might be conceptualized and defined in ways other than the anatomical. This problem involves certain common sense assumptions based upon a Newtonian mechanistic view of movement that are worth exploring briefly. It should come as no surprise to learn that the common sense materialist conception of the body is reinforced in the vocabulary of English.⁵ We talk about physical 'movements' of the diaphragm, tongue, and lips *producing* 'speech sounds'. 'Sound' is thus accorded ontological status as an entity produced by selected parts of the physical body. The English language does not provide a parallel lexical item with which to distinguish physical movements of the arms and hands from any signed entity that is produced: the word 'movement' has to cover both the means of production and the product, and herein lies the source of Stokoe's conceptual problem. He conflates the physical means of

production (viewed according to a Newtonian mechanistic model) with the product. This is one reason why Williams' neologism, 'action sign', is fundamental to an anthropology of human movement. It fills that lexical gap in the English language and enables us to move beyond the conceptual impasse.⁶ Visible body movements produce a modality, 'action' that humans utilize in action sign systems of many kinds. This exactly parallels the way in which a particular set of physical movements of the upper body produces a modality we call 'sound' that humans utilize to create speech/vocal sign systems.

Stokoe's careful attention to comparative descriptive terms is cogent and useful, and I especially agree with his discussion of problems surrounding the words 'verbal' and 'nonverbal'. The terms 'oral' and 'manual', however, would seem to act as metonyms for the entire complex of body parts involved in speech and sign production, and as such remain useful, in my view. I would like to offer two additional thoughts regarding terminology. First, one hopes that sign language linguists might fully embrace the medium in which they work and adopt the term 'kinological' instead of 'phonological'. I doubt that use of the former ever convinced a spoken linguist who remained skeptical of the legitimacy of sign languages (if that was its purpose) and its use may in fact work against such a goal because it sets up expectations of similarity, when the difference in modality entails numerous analytic disparities.

Second, I am somewhat surprised that Kendon's descriptive terms "primary sign language" and "alternate sign language" escape Stokoe's critical attention. These terms inadvertently lead us from a descriptive label to an ontological category. Are there two *kinds of* sign languages, and if so, on what is this ontological decision based? Kendon would have to show us the theoretical significance of hypothesizing that there are two different types of sign languages. Is there an implicit theory at work here suggesting that the native languages of deaf people somehow produce "cognitive structures" that are radically different from people whose native languages are spoken, but who are bilingual in a sign language? And where in such a theoretical formulation does one situate practitioners of Plains Sign Language, for example, for whom there is a continuum between their everyday spoken/gestural practices and using a sign language in storytelling and intertribal contexts? Kendon has, it would seem, examined a social practice that has been institutionalized because successful, and committed the fallacy of internalization by abstracting from the practice according to an implicit mentalistic model of the way intelligence works (on a non-neural level). This

is classic individualism and mentalism and as such has been shown to be a scientific failure (see Harré and Gillet 1994, Warner 1990, Varela 1995a).

In any case, it could be said that Plains Sign Language (or sign-talk, hereafter PST) was the 'primary' language of its practitioners in the inter-tribal contexts in which it developed. Frequent contact between Plains nations who spoke radically different languages demanded that a new language be invented--how was that not 'primary' to that inter-cultural situation? Its use across linguistic boundaries means that the grammar of PST is independent of any particular spoken language, for example. Plains peoples were at least bilingual in one spoken language and PST. Most native ASL users are bilingual in ASL and written English. These kinds of complex ethnographic facts must surely be taken into account: taxonomies are significant, but fruitful only when theoretically ordered rather than bureaucratically motivated. Until Kendon adequately theorizes his position he has made a taxonomic move that confuses bureaucratic order with scientific understanding.

Graphs

Stokoe wishes to identify just two aspects of a sign: a) action to create a hand configuration, and b) further action of that hand in place, or movement of that hand and arm through spatial pathways within the signing space in front of the torso. It is certainly true that the same muscle sets will be involved in both kinds of action, but what is the significance of such an observation? And why is the movement configuration of the hand "more tightly constrained by anatomy" (p47)? More tightly constrained than what? Stokoe's confusions here highlight facts about Labanotation and literacy that have been made elsewhere (see Farnell 1994, 1996, Williams and Farnell 1990) which I will not rehearse here. Suffice it to say that it is precisely because a writing system in the medium provides a means to apperceive movement in new ways that it is so important. It is not simply a means to record what might seem obvious to a naive observer. As Ardener reminds us, "our definition of ... the events depends upon the modes of registration available to us" (1989: 87).

I find I have no difficulty at all conceiving of solutions to dilemmas and difficulties raised by Stokoe *because I can think with the categories* provided by Labanotation. For example, one can readily write a description of a "hand-shape" that does not include the static image implied in the spoken word.

* when written in the hand column of a Labanotation staff means "make a fist". If it takes time to complete the action I can add a symbol, an 'action stroke' of appropriate length to indicate this i.e.

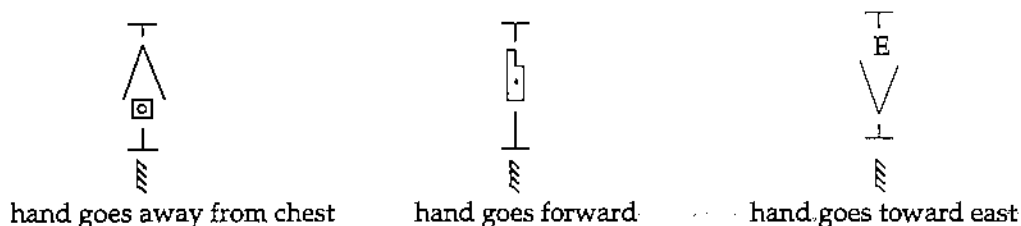
|

- ※ = take time to make a fist (time can be specified musically or according to some other scale of reckoning e.g. seconds, while saying a certain phrase, etc.)

Likewise, geometry is only one way to use the orthogonal axes of three dimensional space. Labanotation employs directions and levels based on these axes (up/down, right/left, front/back) to create finite sets for specifying direction, and their use eliminates any need for numerical measurement (the problem being where does one measure from if using numbers?). Local 'crosses of axes' are imagined in each joint of the major limbs, thereby creating an extremely flexible resource for describing movement paths and body part orientations. I will not delve into this further here but refer the interested reader to Farnell 1994 and 1996. More important to stress here, perhaps, in response to Stokoe, is that such resources for specifying spatial direction in no way "move the analysis into the abstraction of geometry and away from the social meaning creating component of body movement" (p. 48). Rather they become the very means by which we can encode such crucial semantic differences into a transcription. It must be stressed that as socio-cultural anthropologists we are concerned to record action, not gross physical movement. An ethnographic example will make the point clear.

When I first started ethnographic work on the transcription of Plains Sign Language with James Earthboy, an Assiniboine storyteller, I would ask him for clarification about the spatial direction of his actions by saying something like, "Where does the hand movement in that sign go exactly, uncle?" He would usually reply, not with a vocal utterance but with a kinesthetic one: he would repeat the sign. If I asked further, "Is that movement going *away from your chest* or *towards the front*?" He might reply with a correct interpretation that included neither of my suggestions: "It goes East" he might say. The concept involved here, then, is a spatial one involving Assiniboine conceptions of the four cardinal directions and once apprised of that vital information I could then make an ethnographically relevant transcription of the action sign. Without such information I could transcribe the movement, but not an action sign, *and the difference cannot be over-stressed*. Below, I have shown how each of the three possible answers in this example can be

transcribed differently in Labanotation so that the correct spatial concept informing the action is recorded:

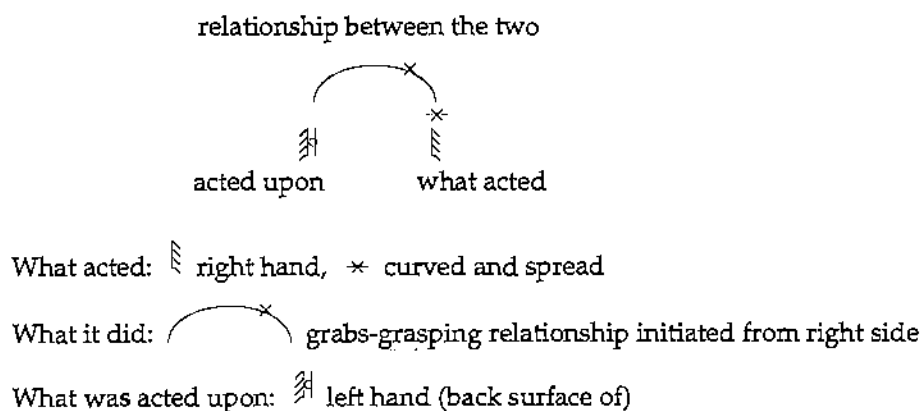


Glossary of Labanotation Symbols:

☞ hand, □ chest, E east, | straight path, ∨ toward, ^ away, ▭ forward middle

This is not an “abstraction of geometry” but a transcription of three different action signs that may look identical when performed, but are different in meaning.

Stokoe identifies a prototypical instance of language use with great clarity on p. 48 when he suggests a hypothetical visual symbolization of the idea “a leopard pounces on an antelope” with the action of one hand grabbing the other. What we see is, “A visible sign that shows what acted, what it did and that the two are directly linked in relationship”. This is precisely no more and no less than the Labanotation transcription of such an action sign could record:



What we also have here in this simple but profound evolutionary moment is a conceptual basis for discovering cause and effect, and hence the emergence of an awareness of agency.

Language and Not Language

Stokoe notes on p. 55 that "in a community of deaf people ... the ethnographer must try to distinguish movement that is language from movement that is not language". This applies to all human communities if one considers the gestural action signs that accompany speech, or occasionally replace it, to be fully linguistic. Adam Kendon, David McNeill and I approach the subject of co-expressive speech/gesture from different theoretical perspectives, but we all embrace this fundamental premise. So we must pose the question: Is the distinction between language and non-language valid? And if it is, where does the boundary lie? To answer this with any cogency we have to return to fundamental theoretical definitions of what it means to be human. The notion of action signs in semasiological theory, for example, presupposes a view of human beings as meaning-making agents (Williams 1982). Given this premise, we can say there are action sign systems that are fully linguistic, in the sense that they utilize a discursive and propositional syntax just like spoken language utterances. Examples would include sign languages and co-expressive spoken/gestural systems. Some dance traditions (e.g. Bharata Natyam and Hawaiian and Tongan dance forms) also make great use of linguistic narrative form through action sign poetry.

All these forms might also be labeled "expressive" as indeed they are, but should not on those grounds be categorized in opposition to 'instrumental' actions or 'practical skills'. The kinds of action signs we perform everyday while washing, eating, dressing, and so forth, are clearly different from those involved when using a sign language or gesturing while speaking. We can, for example, distinguish between a Plains sign-talker telling a story with signs and breaks in the narrative as she takes a sip from a cup of coffee. Such acts as the latter are not 'linguistic' in the sense of being part of a propositional system, but they are best viewed as *linguistically-tied* because they are still meaning-centered signifying acts, and are performed at the discretion of a language using actor according to cultural constraints. As physical skills they usually draw upon tacit knowledge, and may or may not be talked about--they constitute 'knowing how' rather than 'knowing that', to use Gilbert Ryle's terms. These are not two different things--linguistic and nonlinguistic actions--but different aspects of persons making meaning through different forms, dependent upon their intentions, situation, and purposes. It is the context which determines the nature of an act and this fact makes any absolute division between "instrumental" and "expressive" erroneous. For

example eating *wozap'e* (a warm berry soup made by the Assiniboine and other Siouan speaking peoples) for dessert, and eating *wozap'e* as a ritual act during the close of a sun dance ceremony (see also Farnell 1995:19 and Williams 1991: 242).

Let me close these comments by suggesting that the long history of the world's writing systems, past and present (see Daniels and Bright 1996), suggests that the adoption and development of such inventions, or lack thereof, has much more to do with politics and the power of social and educational institutions than with the linguistic merits of any particular system. Had Stokoe been deaf, for example, had he promoted his writing system among the Deaf community at Gallaudet University as a means to develop literacy in their native language, had it been recognized and welcomed by educators of the Deaf and prominent members of the Deaf community at the time, and had there been considerable financial resources poured into producing teaching materials and training teachers, who knows what the results may have been? At present, however, the American Deaf community considers written English their second language, and as such, the only writing system they want.

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Notes:

¹ This should not be confused with the spatial opposition 'inside/outside' which distinguishes between spaces internal to the body and spaces outside, for example.

²It would appear that several modes of inquiry besides anthropology are currently in the process of a meta-theoretical shift away from Cartesian notions of person, however. To mention just two examples: recent shifts toward a *cultural* psychology in the work of Harré & Gillet, Schweder, Bruner, Shotter, and others, draw upon the earlier anti-Cartesian agenda of G.H. Mead, Vygotsky and Wittgenstein. Even within staunchly Cartesian endeavors such as cognitive science, artificial intelligence and robotics, a recent work (Clark 1997) suggests that treating cognition as mental problem-solving has abstracted too far from the very body and world in which our brains evolved to guide us. Clark suggests that "a key to understanding brains is to see them as controllers of embodied activity" and calls for "a science of the embodied mind." It should not be forgotten that the whole view of mind as action embedded in a dynamic relationship with some environmental niche is the heart of Darwinian theory. This was the inspiration that informed the American pragmatists Dewey and Mead to formulate a *social* theory of mind, self and the individual in society as long ago as 1900-1915 (see Varela 1994).

I should also note in passing that similar theoretical concerns have motivated a number of social scientists and other scholars to identify "the body" as a focus of inquiry. Several

have been inspired by the writings of Merleau-Ponty in efforts to transcend the legacy of Cartesianism. Unfortunately much of this work simply flips the Cartesian coin and the discourse now privileges "body" over "mind" but retains the dualism. An adequate account of the location of human agency as a causal power of persons is missing in much of this work (see Varela 1995, 1996 for detailed discussion).

³ The conference was organized by Sherman Wilcox at the University of New Mexico, Albuquerque, July 1995. Dr. Stokoe gave the keynote address.

⁴ Several different approaches to ASL "phonology" have been developed. Wilbur 1987 provides a useful overview of traditional and current approaches.

⁵ Varela 1995: 266-268 discusses the importance of a dynamical theory of matter for an adequate account of human agency and causal power, in contrast to the mechanical, materialist common sense view mentioned here.

⁶ The term 'action sign' does much more than this theoretically. It constitutes a distinctive and central concept in semasiological theory. See Williams 1982, 1991.

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