

## INTRODUCTION

It is with great pleasure that I undertake the task of writing an introduction to the three graduate papers that comprise this issue of JASEM because each of these papers represents a solid example of semasiological concern and research. The papers have been written as each of the authors progresses towards completion of a Master's degree in the Anthropology of Human Movement, a course of study presently offered in the Department of Dance and Dance Education in cooperation with the Department of Anthropology at New York University.

The program itself only became 'official' this term; 15 October, 1981. Given these circumstances, it seemed fitting that the official birth of the program be accompanied by public recognition of the work of four students who, against tremendous odds (not the least being the fact that so far, they have studied a subject that academically did not exist), have persevered and who, through general agreement among their professors in social and cultural anthropology and linguistics, have achieved impressive results during the past two years of the program's existence.

As their major Professor, and as the architect of semasiological theory in human movement studies, it is with considerable pride that I present these students' contributions to social anthropologists and to the dispassionate critical scrutiny of my colleagues in England, Holland, Australia and the United States. I stand by their work thus far as I do by my own, not because I am obliged to do so by external pressures of any kind, but simply because they have understood; because without exception, they have consistently refused to take an easy way out with reference to choice of courses, standards of writing, use of language or theoretical commitment. In the present climate of educational times, where graduate degrees are often seen as union cards, or as certificates for life experience or as tiresome obstacles in the path of aggressively pursued personal aims, the kinds of day-to-day, month-to-month effort they have made is easily overlooked: it is anything but normal.

My appreciation of these novice writers in the field is not, I think, exaggerated, nor is it misplaced. In their worlds (and in mine, in a wider sense), to say that one is an anthropologist in the United States is to evoke images, usually, of potsherds, skeletons or chimpanzees. The systematic study of cultures or societies; the examination of conventions, customs, codes of communication or structured systems of human meaning does not, at least in the popular interpretation, even compete. The phrase 'human movement' is, if anything, more problematical, as it is usually taken to mean 'migrations' -- or worse. It is rarely associated with deaf-mute signing, the martial arts, rites and ceremonies, dances, spatial oppositions or with a notion of human body languages that has a solid reality and that is taken seriously.

From a theoretical standpoint, if they could say that they were exponents of a 'kinesic',<sup>1</sup> 'proxemic'<sup>2</sup> or 'semiotic'<sup>3</sup> approach, they might elicit some fraction of positive response, but 'semasiology'<sup>4</sup>? What on earth is that? In other words, these students have learned about

social taxonomies, human categories and classificatory systems -- essential 'tools of their trade' -- the hard way. It is a lesson, moreover, that in some form or another they learn or re-learn every day.

They have also learned, to their cost, that to use the phrase 'anthropology of the dance' to designate their area of specialization is dangerous because the association of frivolity inevitably seems to arise. Someone recently said to me, for example: 'Chomskyan phrase structure grammar of the foxtrot? You have to be joking!' But we are not joking, nor I might add, does the investigation trivialise Chomskyan method in any way. Myers' exegesis of phrase-structural and transformational rules for two relatively uncomplicated moves in American (and European) social dancing is no 'joke'. On the contrary, its main significance lies elsewhere: minus externally motivated structures of music, the movements he investigates are those that are fundamental to nearly all internally motivated forms of human body languages, i.e. forward 'steps', side 'steps' and the odd backward pace. Myers' paper is the first fruits of study that will lead to Doctoral work on artificial intelligence and computer-generated texts, for this is where his main interest in the social anthropology of human movement lies, but more of this later.

As I believe that Myers' solid accomplishments as a professional ballroom dancer and teacher have contributed to his ability to grasp the intricacies of such abstruse methodological concepts as permutational analyses for human movement studies, so I also believe that Durr's and Farnell's accomplishments as ballet dancer and teacher, and educational dancer and teacher respectively have contributed -- as has their 'in depth' understanding of the Laban system of notating movement -- to their ability to comprehend the principles of dual symbolic classification.<sup>5</sup> Puri's reputation as an internationally known performer and teacher of Bharata Natyam adds lustre: it does not detract from her scholarly examination of the complexities of the hasta-mudra. To all of them, Polanyi's discussions of the 'art of knowing', of "...the transition from 'knowing how' to 'knowing what...' (1962:56) is anything but an empty academic exercise in sterile word-mongering. But in this, they perhaps reflect most clearly the influence of the personal anthropology<sup>6</sup> of their teacher; semasiology itself derived in part from "...a sustained study of four idioms of dance" (Williams, 1976:123).

I submit, then, that the process by which these graduate students have so far arrived at their understanding of anthropology is itself of keen anthropological interest, for none of them try to press often-heard, but nevertheless hopelessly confused claims about mysterious 'private knowledges' that are conferred on them by their various experiences of moving. The 'mystery' lies elsewhere; in the fact that somehow, out of the twenty-odd students who began this course of study, they managed to hang on to the realization that objective criteria are necessary even for performers to recognize what experiences they are having. And it is just here, of course, that the 'social facts' of structured systems of human actions clearly emerge.

None of them support the substantial, but patently false, claim that is often made by dancers -- and many others, including anthropologists -- that only those who move (in some particular idiom) can identify or have knowledge of the movements. They neither make their case for anthropological credentials on these shaky grounds, nor do they offer introspective reports on the character of their inner experiences. They do claim that 'expertise' in a single idiom of body language plus a working knowledge of at least two (and better, three) other systems places them in an advantageous position, just as a linguist who knows his or her native language thoroughly and is fluent in one or two other languages is in an advantageous position. They also claim that the realistic ways that they would now advocate of investigating the similarities and differences within human action sign systems will permit a more comprehensible picture to emerge of (i) the nature of the human beings who generate these systems and (ii) the kinds of modern analytic categories and devices which are available that will protect social anthropology, with reference to human movement studies, from ethnocentrism and prevent distortions of the richness, uniqueness and diversity of the world's body languages.

Thus, I am convinced that the linguistic analogy to human movement<sup>7</sup> that is refracted through these essays as light through a prism and which is encoded in the phrase 'the semasiological point of view', offers the best and most practical means of approaching cross-cultural or cross-disciplinary comparisons of human actions and events. And I would not want the import of what I have said here to be misconstrued: these essays represent beginnings into semasiological enquiry -- not 'endings'. They are brave (and some may think foolhardy) attempts to provoke discussion among social and cultural anthropologists -- some of whom are from very different theoretical persuasions -- about little known and less understood features of movement studies, but for this, I will gladly assume responsibility because I am aware, more than they are at present, of the significance of their continuing work and its anticipated results in the wider anthropological community.

We know very well where the faults lie -- but they are not all ours: sometimes we may seem to 'over-explain', i.e. "The systematic study of body language is still in its infancy and as yet lacks an established meta-language in which to talk about movement. We prefer an initial dependence on the technical terminology of linguistics in order to investigate some of the characteristics of human action sign systems which are similar to those of spoken language" (Puri, p. 282, n. 8). But we try to handle specialist terms from other disciplines with care because under-explanation or the arrogance implied by cavalier usages of anyone's technical scholarly vocabulary is a criticism that we wish to avoid.

"Specifically", Myers says, 'we will examine in how far Chomskyan phrase-structure grammar is applicable in the framework of a semasiological analysis of the American Foxtrot. To my knowledge, no such application has been attempted...' (Myers, p. 246; underline supplied). When new

ground is broken in this way, argument is bound to ensue. We are fully cognizant of "the many questions that will inevitably arise", but we think we can handle them.

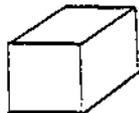
The Farnell-Durr paper ends with a visual representation of a paramorphic model of local Euclidean space. 'How enigmatic' or 'how cute!' some puzzled reader might say. We would answer, in our defense, that the disproportion of relation between great theoretical power and simple diagram imagery is noticeable in other writings than ours, e.g. as in Saussure (1966:112-118), Ardener (1980:307 and 311), or Wittgenstein (1965:169-173), and we are not ashamed to acknowledge acquaintance with, or the constant inspiration of, minds like these.

If these are presumptuous remarks issuing from the mouths of novice social anthropologists and their teacher, they are at least not the unguarded proclamations of four young enthusiasts who, in anthropology -- or the dance -- think that they have found some 'new' solution to the human condition. Again, I will assume the lion's share of responsibility, because I would prefer to think that in twenty years' time these young semasiologists had failed in their attempts to grapple with the real complexities of movement study, than to imagine that they had succeeded in generating yet more tedious studies in a field already overburdened with them.

## THE PAPERS

### I

Wittgenstein observed that "We are inclined to be puzzled by the three-dimensional appearance of the drawing



in a way expressed by the question "What does seeing it three-dimensionally consist in?" And this question really asks 'What is it that is added to simply seeing the drawing when we see it three-dimensionally?' And yet what answer can we expect to this question? It is the form of this question which produces the puzzlement. As Hertz says: "Aber offenbar irrt die Frage in Bezug auf die Antwort, welche sie erwartet" (p. 9, Einleitung, Die Prins-Zipien der Mechanik). The question itself keeps the mind pressing against a blank wall thereby preventing it from ever finding the outlet. To show a man how to get out you have first of all to free him from the misleading influence of the question (Wittgenstein, 1965:169).

The question that is central to the Farnell-Durr paper, 'where is up?' may seem to press readers' minds to a blank wall if it does not appear to be hopelessly silly in the first place, yet such a question, seen in the context of movement literacy and in the context of ethnography (used in the loose sense, where written texts are ethnography), the question is anything but trivial. Both highly accomplished writers

of movement, the authors of this piece are acutely aware of the problems of transcription of action signs and the care that must be taken by an ethnographer to discover just how and in what ways the subject(s) of the investigation conceptualize the spaces in which they move. They know that before an investigator sets pen to paper to write a score, that the 'cross-of-axes' problem has to be addressed. They must find out from the informants -- literally -- 'where is up?' And they cannot ask the question directly; it might require six months or more of fieldwork to arrive at a partial insight into the matter.

They have attempted clearly to show that if constant features of the dimension of up/down to the informant(s) and its place in their value system is not understood, then the resulting text of the action-utterance, be it one sign, a longer stretch or an entire score, is likely to be conceptually flawed such that any further analysis based on the text will produce coincident distortions. They have confined themselves to simple movements and simple written examples of movements, not because they are incapable of speaking about more complex moves, or indeed, lengthy texts of actions, but because we believe that readers who cannot 'read' Labanotation, through comparison of the writings provided, can see the differences in the graphic expressions of the movements and the reasons for the differences.

At another level, the Farnell-Durr paper illustrates the futility of theoretical approaches to human movement that attempt to separate the empirical from the conceptual with reference to human actions; thus their paper can be understood either on a pragmatic or on an explanatory level, or both. That is to say that the paper can be read with a view towards understanding how a semasiologist sets about preparations for writing a movement score as a 'practical' act. Or, the paper can be read with a view towards understanding the intricacies of relations between the 'natural' world and the kinds of lexically labelled categories of spatial referents that are likely to be encountered in any given action sign system.

## II

Only some of the kinds of analysis that semasiology represents were implemented through, or informed by, Chomskyan linguistics. There were other, prior sources of inspiration that were, and are, more important in my own work. In fact, during the years 1970-71, I pointed to Chomsky's work as a kind of 'marker'; a partial realization of modern method in descriptive analytical techniques. Ardener, Crick, Barley and other colleagues were aware, as I was, that social anthropology had tended to lag behind the science of linguistics in the usage of 'numerate' modes of theory-construction in particular, and in allied types of formal description in general; however, as the examination of the literacy of human movement progressed, it became evident that the rules for speech and the rules for human movement -- irrevocably connected though they are, belonged to different worlds of logical and semantic complexity. In the interests of semasiological theory as a whole, in 1973, I cut even the loose connections that my own work had with Chomskyan linguistic terminology by shifting descriptive theoretical terms, for example, from 'deep' and 'surface' structure to 'intransitive' and 'transitive' structure respectively.<sup>8</sup>

Interest was retained in some Chomskyan concepts, notably those of 'competence' and 'performance'; of phrase-structural grammars and generative grammars. I had hopes then that in future one or more graduate students might see that a full exploration of Chomskyan concepts would provide an as yet unexplored, and very rich, area of investigation into the nature of human movement. Myers' paper is both a 'substantial' and 'sequential' realization of that hope. He has begun to sink a shaft into unmined intellectual grounds and has already struck veins of ore. His paper has much to tell us, for a start, about the nature of human movement when those movements are viewed, not as mindless, affective and relatively meaningless 'behaviours', but as 'actions'; as the terminations of rule-based transformations of experience.

There are few social anthropologists (and far fewer members of a notional 'general public') who are sufficiently sophisticated regarding human movement studies to recognize that 'ungrammatical' executions (or 'utterances') are physically or semantically possible in any idiom of body language whatsoever. Among those who have penetrated into deeper levels of comprehension, however, it is apparent that the medium of human movement is as profoundly rule-based as is the medium of sound -- perhaps more so, if the complexities of analytic re-descriptions regarding the medium are taken into account.

Linguists, on the other hand, may wonder why Myers' paper does not bring to bear later developments in, say, French phonic analysis into his deliberations, or why such care is taken to 'spell out' a Chomskyan application that they feel they have by-passed. One can only say in response that the nature of the medium we deal with is different (an 'obvious' but little-recognised fact of great import). It is so different that we feel justified in taking extra care with the initiation and development of our usage of linguistic models.

Careful reading of these papers, as indeed of my own (e.g. Williams, 1980) where the application of Saussurian ideas to movement is emphasised, will prove that our work is not that heavily dependent on linguistic models per se. We do not 'crib' from the linguists: we know where they are, and would ask them for reciprocal understanding, for all of this work is a genuine development from social anthropology (see Ardener (1971), Crick (1976) and Williams (1977)). Through a certain 'sleight of mind', all our contributions can be de-structured and read as if they were simply paralinguistic paraphernalia.

### III

On one level, Puri's paper, like Myers', is a clear illustration of this: "It is our belief", she says, "that gestural signs are neither 'precursors of' nor 'substitutes for' spoken language...They are elements of body language (underline supplied) and belong to a parallel system of language that allows for the generation of different kinds of meaning. Multiple meaning is made possible by the multi-dimensionality of the medium of movement, that allows one to express simultaneously several sets of distinctions along the different structural axes that characterize

this medium. A single gesture can be opposed to several others with reference to laterality, while at the same time one can express distinctions along the up/down, back/front and inside/outside axes..." (p.281 ).

The question of synonymy with reference to human body languages is virtually totally unexplored, yet generalizations are constantly made that would indicate that the concept has been examined with reference to body languages and that criteria exist whereby the generalizations can be rationally defended. "To say that two different sequences of body language or even two gestures from different codes 'have the same meaning' is to claim that they are synonymous...Great carelessness has been exhibited in the usage of these concepts regarding body languages" (Williams, 1972:4). Synonymy in the study of human action sign systems has many facets, many subtleties: it is linked to the notions of homonymy and polysemy, and to antonymy. Through the usage of concepts like these, we have found that one may make linkages between structure and semantics.

The 'gut' of Puri's paper from this standpoint consists of the following six propositions (taking the Saussurian notion of signifié-signifiant and her data-base into account):



1. If  $A_1 \equiv B_1$  .  $A_2 \not\equiv B_2$ , then A.B = Homonyms, i.e.  $A \equiv_{df} B$  (H).
2. If  $A_1 \equiv B_1$  .  $A_2 \not\equiv B_2$ , then A.B = Homokines, i.e.  $A \equiv_{cxt} B$  (Hk).
3. If  $A_1 \equiv B_1$  .  $A_2 \not\equiv B_2$ , then A.B = Polysemes, i.e.  $A \equiv_{int} B$  (P).
4. If  $A_1 \not\equiv B_1$  .  $A_2 \equiv B_2$ , then A.B = Synonyms, i.e.  $A \equiv_{df} B$  (S).
5. If A . A . B . B simply repeat themselves, as in a series, then they are obvious cases of identity, i.e.  $A=A.B=B$ , which is a tautologous, but sometimes necessary statement to make.
6. If  $A \equiv \sim B$  .  $B \equiv \sim A$  and the same relation holds for A . B, then A.B = Antonyms, i.e.  $A \equiv \sim B.B \equiv \sim A$  (An).<sup>9</sup>

(NB: for interpretation of notational elements of the above, see footnote 9).

At a structural level, as Puri points out, it is possible to confuse homokines with homonyms. The two terms are meant to distinguish (i) between inter-, and intra-cultural analysis of signs, and (ii) between an investigator's treatment of those elements of actions, or short

sequences of actions, that are semantically null with elements of action signs (that always include signifier-signified relations) that are semantically dense. Myers' treatment, for example, of the moves in Foxtrot is homokinetic throughout; had he taken into account the 'signifieds' (as in a piece of choreography or in a competition situation), the analysis would have become too unwieldy.

Puri's paper, in contrast, is completely 'sign-oriented', i.e. she does not 'cut' the signifi -signifiant relation for the purposes of her analysis, and the significance of Puri's paper is two-fold: (i) it draws our attention to the fact that hand (or body) positions are usually conflated with the movements of the positions through space and/or with the relations of the hand positions to other bodily parts, and (ii) it draws attention to the matter of 'naming' and body languages, i.e. to name a hand position does not provide us with warrants whereby we can with impunity attach the linguistic gloss for the position to every usage of the position within a moving system in three-dimensional space.

And, yes, all of this is complicated, but it is well to remember that the medium of human movement may be the most complex system of human expression that we possess. We think it unnecessary to apologise for the nature of the phenomena. We do insist, however, that superficial or thought-less assignments of 'sameness' in the domain of the semantics of human movement -- especially in the realm of cross-cultural comparison -- be stringently questioned. We view identity statements about the meanings of human action signs with extreme scepticism, demanding of ourselves rigorous criteria of judgment as to their 'sameness'.

#### Generative Structures: the 'finiteness' of movement

In one of the few explicit methodological statements articulated by L vi-Strauss we read:

- (i) define the phenomenon under study as a relation between two or more terms, real or supposed;
- (ii) construct a table of possible permutations between these terms;
- (iii) take this table as the general object of analysis which, at this level only, can yield necessary connections, the empirical phenomenon considered at the beginning being only one possible combination among others, the complete system of which must be reconstructed beforehand (1969:84).

It was interesting, in 1971, to have worked out and then to see, what "a table of possible permutations" for one degree of freedom for the head would look like (Williams, 1976:131-133). At the time, the table stood as a reminder that the kind of analysis that was done regarding a single four-character 'taxa' (i.e. ODUO) for the head could be applied to the entire semasiological body and all of its degrees of freedom. Further work was done in 1973 and 1974 on the body member 'arm', and this was finally published four years later (see Williams, 1977:42).

Both exercises were done in aid of explaining the device that governs (or generates) the utterances of human sign systems in body languages. These permutational tables provide future semasiologists with the factual basis for theoretical statements about 'competence/performance' relations or 'figure/ground' relations for the human body and the space in which it moves. Recently, owing to the availability of sophisticated computing equipment, further insights have been gained into the nature of permutational analysis in relation to post-structuralist human movement studies.

We asked ourselves, 'what would permutational tables look like if they were carried out on larger segments (and finally, the total) human semasiological body? For example, suppose the permutations of a string of twelve (that is, the twelve utterances shown to be possible for one degree of freedom for the head; 'zero', 'up', 'down', 'zero' or 'ODUO') were to be treated by factors of twelve? The result for one string of twelve yielded  $E = 479,001,600$ . We then asked, what are the permutations for all five degrees of freedom for the head?' The result:  $E = 2,395,998,000$  (2 billion, 395 million, 998 thousand, 0 hundreds) of possible permutations. The body member 'arm' possesses 13 billion, 412 million, 44 thousand, 800 possible permutations. Head and arm combined, at an intransitive level, amounts to 15 billion, 807 million, 052 thousand, 800 permutations.

These numbers, relatively meaningless by themselves, acquire significance when seen as the finite limits that really exist in connection with our rather vague notions concerning the 'infinity' of movements that we imagine human expressive bodies to be able to perform. Just what 'freedoms' the human expressive body actually possesses is a matter of utmost concern to us in several ways,<sup>10</sup> because "To discern significant elements in any given 'natural' system of body language, the investigator must know the boundaries of physical and logical possibility and impossibility that the system involves" (Williams, 1977:64, note 18).

The whole semasiological body, calculated on the basis of the eighty-six degrees of freedom set out in Williams (1976), is capable of 41 billion, 194 million, 137 thousand, 6 hundred permutations in space (the number is based on permutations of twelve sets of four characters each, i.e. 'ODUO' and the like).<sup>11</sup> The human body, in other words, is both physically and logically constrained in its capacity to physically 'act' in certain definable ways. It is just here, of course, that a semasiological definition of 'rule' begins; at the level of this kind of 'meta-rule' where we understand the rules that are paradigmatic to the whole expressive bodily system. Thus, given the numerical potential stated above, we may further say that no human system of body language exhausts, through usage or in practise, all of this potential.

A living human being in a state of being still or at rest in any given position such that no empirically perceivable motion is taking place is nevertheless best seen as a creature that has the nature, powers and capacities to 'exteriorise' or 'manifest' significant motion in any or all of the degrees of freedom -- and their simple permutations -- that have thus far been described in numerate, arithmetical terms.<sup>12</sup>

No human actor that we know of uses all of this potential, nor does any one system use all of it. A certain redundancy feature seems built in, as it were, but the important point concerning exercises like these consists in the fact that "action sign systems, like linguistic sign systems, do not themselves invoke entropy" (Williams, 1975:I, 133). That is, human actors may die, or be replaced, but the above-described capacity for movement, plus the categorical roles, rules and their attendant values persist.

The integrity of sign systems seems to be maintained in spite of entropic tendencies by the repeated consumption of human energy. It would seem that the problem of human 'civilization' anywhere in the world lies in this. The semasiologist's task, with regard to human movement studies, is to explain how it happens. Clearly, one crucial factor is the human capacity to plan in advance. Another is the human capacity to create higher order structures. Right now, we are heavily involved in the task of identifying formal, structural, 'causes'<sup>13</sup> that contribute to the continuity of human dances, rites, signing, martial art techniques and what-you-will that is based on a semantic anthropological definition of what a human being is in the first place.

Different modes of handling the mathematical operations of factoring and exponentiation with reference to permutational tables reveals further interesting properties of the paradigmatic-syntagmatic scale<sup>14</sup> considered as a model for the continuous generation of events (see Ardener, 1980). For example, if, instead of regarding the 'ODUO', 'OUDO' strings of moves as four-letter codons or taxa, we regarded them as separate characters, i.e. as O,U,D,O,O,D,U,O,O,D,O,U...etc., then the permutational table itself becomes a 48 space string that has four possibilities for each space, yielding a 4 x 4 matrix for each codon, with the result that the total matrix is  $4^{48}$ . It is important to remember here that one is now dealing with permutations of only one degree of freedom; the lexically-labelled category of 'up/down'.

We think the result of this was rather fun, and we are not by any means finished with our investigations and can only make some tentative conclusions, but the numerical results of the above exercise comes to  $(7.92281651427) E + 28$ , which means that the number is exponentiated to ten to the twenty-eighth power. The immediately preceding notation, translated into arithmetical terms comes to 79 octillion, 228 septillion, 162 sextillion, 514 quintillion, 270 quadrillion -- with fifteen zeros attached, i.e. 79,228,162,514,270,000,000,000,000,000.

The raw number by itself, is to us fairly uninteresting. What is interesting is the relation between factorials and permutations: that is, by nature (in movement study), it would seem that when 'x' increases by 'E', it produces a geometric, in contrast to an arithmetic progression. Thus, if one travels 'up' the paradigmatic-syntagmatic scale, as it were, from a single 'kineme' towards 'all theoretically possible human movement', there is an exponential increase. Conversely, if one's first move is from such permutational S-structures to 'p:s' or 'p/s' structures (i.e. from all theoretically possible human movement to separate codes of a body language), numbers decrease exponentially as fast as they increase in the other direction. The move from 'S-structures' to 's-structures', then, involves a jump from the notionally 'infinite' to a kind of 'short-memory capacity': that is, a number that we can more or less comprehend.

But people tend to have rather bizarre notions about 'infinity', 'freedom' and human movement. Sapir was probably right when he said, "...we respond to gestures with an extreme alertness and, one might almost say, in accordance with an elaborate and secret code that is written nowhere, known by none, and understood by all" (1949:556). However, the 'code' to which he referred intuitively is no longer "nowhere written" and it can no longer be said that it is "known by none". I would have preferred even in 1959, which was long before I became a social anthropologist, to have changed the word 'understood' in the Sapirian formulation to 'used by all', because however proficient one may be in the usage or performance of a body language (or any idiom thereof), the ability to perform well does not mean that one understands how the total system is constructed. I doubt that the "unwritten codes" and the rules of body languages are even vaguely "understood" by many people, then or now. Local knowledge of one or two systems is not enough. Local knowledge of one or two gestures is not enough either, as we shall see.

### Thumbing a Ride

The hand position, 'shikhara' and the hand-position for thumbing a ride are, to many, synonymous. In our terminology, the signifiers



' can be written alike and we see the positions as a homokine.<sup>15</sup>

'Shikhara', however, is the name of a hand position (see Puri, p. 269) that is analogous to the names 'alpha', 'beta', or 'gamma' for characters of the Greek alphabet. Although the name 'shikhara' means 'spire' or 'peak', we are told that this has "little connection with the meanings conveyed by the gestures that this hasta is used to form" (Puri, p. 272). 'Thumbing a ride' or the hand position that is conventionally used throughout the English-speaking world to convey hitch-hikers' requests for rides has no name as a position; it does not occupy a place in a system of like positions, as does the hasta.

Already, we are in deep semasiological trouble, because the hand position as hasta is not the same kind of analytical unit of action as is the hand position seen in this context:

"Just west of Albuquerque on Highway 66 two soldiers stood astride their duffle bags thumbing a ride" (Birdwhistell, 1970:175).

The action-sign context in which we envision the realities described in the sentence above is written in Fig. I.

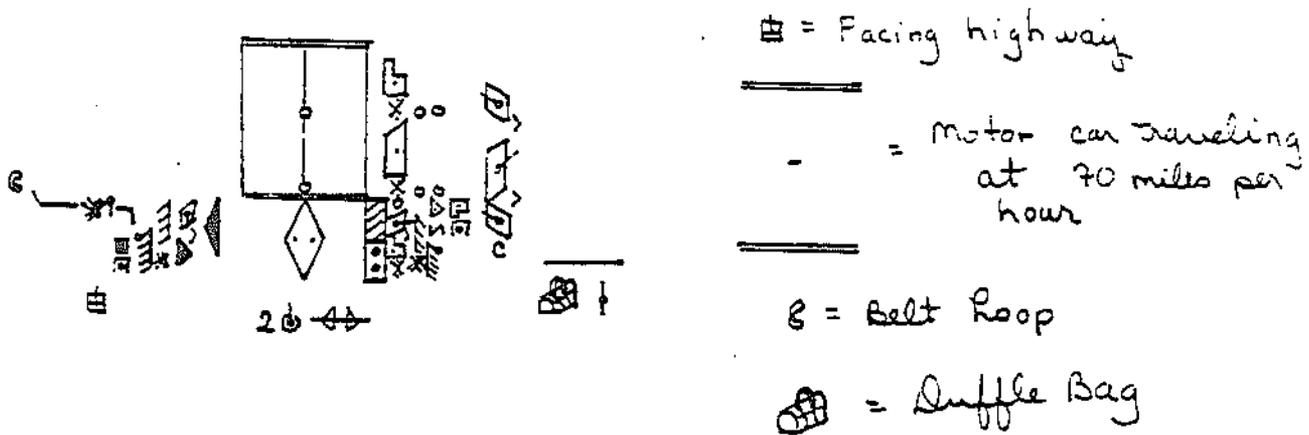


Figure 1

The soldiers do not imagine themselves to be performing a hasta (that has at least eight system-specific usages in Indian classical dancing), nor does the notion of 'thumbing a ride' enter into a classical dancer's mind whilst performing Bharata Natyam, but the persistence with which some will insist that because there is a similarity of signifiers, there must be a similarity of meanings is astonishing. We are aware, of course, that there has been an on-going debate regarding word-meaning relations for several thousand years (see Lyons, 1968:1-55). Debate over gesture-meaning relations do not possess that kind of distinguished history, nevertheless we would like both to revive a 'piece of history' that we do have and we want to re-examine E.B. Tylor's preoccupations regarding gesture-meaning relations (see Henson, 1974:16-19); for we find some of our colleagues' more recent explanations and assertions about these matters perplexing.

For example, Birdwhistell's 'macrokinetic translation' of the sentence above: "The two soldiers stood in parallel, legs akimbo with an intra-femoral index of 45 degrees. In unison, each raised his right upper arm to about an 80 degree angle with his body and, in an anterior-posterior sweep with a double pivot at shoulder and elbow; the four fingers of the right hand were curled and the thumb was posteriorly hooked; the right palm faced the body. Their left arms were held closer to the body with an elbow bend of about 90 degrees. The four fingers were curled and the thumb was partially hidden as it crooked into their respective belts..." (1970:176).

What, we ask, has happened here to 'thumbing a ride'? The act does not disappear in our text (see Fig. 1). Nothing 'disappears' there and we are required to deal with it all. The social and semantic act of thumbing a ride does disappear into Birdwhistell's quasi-anatomical description that is obviously intended to over-ride the action itself, as we are told that it is a 'macro' (not a 'micro') kinesic description. Are we to assume that in this kind of scientific, objective description (or its analytical techniques) is to be found some causal mechanism for the intentional, rule-based, conceptually loaded human action of thumbing a ride? How are we to deal with the assertion that thumbing a ride (and any other meaningful human gesture, including the hastamudra) is merely a part of "body motion behavior" plus the "communicative patterns" to which they belong and that they are infra-communicational and not directly meaningful in themselves; "Nor is meaning encapsulated atomistically in particular motions" (Birdwhistell, 1970:173)?

In the theoretical and methodological world of semasiology, we do not hold the assumption that better knowledge of the physiology and physics of movement, than of its intentional, reflexive, rule-bound nature is going to permit a more 'scientific' analysis of human actions. We do not interpret the term 'behaviour' -- if we use it at all -- as 'movements in space', but as 'rule-following actions', and in the end, to us, a 'unit' of action is not so much a 'piece of substantive behaviour' as it is an expressive 'piece of body language'.

Nor do we understand how we are to explain either 'thumbing a ride' or 'shikhara' if we start from the premise that both are (phon)emes of culture; that they are particular to specific cultures, but that there is something that is 'culturally neutral'; some general (phon)etic<sup>16</sup> level that will serve 'scientifically' to explain them both. If the 'emic' elements of dances and human body languages are culture-specific and variable, then we would like to know more about the 'constants' to which the ethnoscientists allude that somehow hang the 'variables' together, if they do.

Semasiology postulates certain structural invariants with reference to the human body and to the space in which it moves (see Williams, 1975, 1976, 1977, 1980) and our analytical re-descriptions are related to (and informed by) a model of mathematical degrees of freedom of the human expressive body. We therefore postulate a level of explanation that is generated (not 'caused', not 'motivated') by creatures who are by definition language-using, rule-following, role-creating makers of meanings. And yes, we understand the social anthropology of human movement to be a language-based, rather than a 'behavioural' science (see Williams, 1976a). Given the vicissitudes of ordinary language-use and the fact that we cannot control readers' interpretations, we do ask that some restraint is exercised before quick conclusions are formed that what we have to say has all been said before; that our kinological level of explanation, is, for example, just a re-labelling of the ethnoscientists' 'etic' level. Or that we, like our kinesically-oriented colleagues, seek for our scientific explanations in their kind of behavioural science paradigm of explanation. We do not.

Thus, when Adrienne Kaeppler observes that "Williams proposes 'seven basic transformational rules' which underlie any dance or ritual idiom anywhere in the world" (1978:128), one wants to say that these rules must be understood as meta-rules, i.e. the rules of all other levels of rules of human actions. They are not the same kinds of transformational rules that Myers spells out for the Foxtrot. We do appreciate Kaeppler's further observation that "Williams has opened another door to potential understanding of dance and society through analytical techniques" (1978:128), because ours is a different door, and we cordially invite examination of some of what lies on the other side.

Indeed, the significance of the four essays in this issue of JASHM may simply lie in the fact that for once, readers can enjoy a wide-ranging treatment of ethnographic and other kinds of 'fact' about human movement that stems from a comparatively unitary methodological and theoretical approach. Semasiology's usage of formal models to describe the inner mechanisms and structures of human actions (seen to constrain any possible 'output' of actions) does provide these essays with a certain unity of style. We see this as an asset: a removal of the often painful intellectual jolts that are caused by readers having to 'shift gears' from one set of incompatible theoretical assumptions to another.

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#### NOTES

1. Only an inadequate summary of the kinesic approach to human movement studies can be given here. For complete discussion, the reader is referred to Birdwhistell (1970). The following points I consider to be relevant to the discussion: (i) as a term, 'kinesics' refers to a body of knowledge that is prior to a field of study that would be called 'kinesiology', (ii) kinesics is based upon psychiatrically oriented interview material because body motion and gesture are important sources of information regarding personality and symptomology, (iii) a diagnostic model of events is emphasised, as are diagnostic methods and values, (iv) formalised gestures, theatrical performances and the like are only of 'collateral interest' and (v) the most important anthropological contributions to the study of body motion as a communicational system are, in kinesists' view, the works of two exponents of the culture-personality approach in American anthropology: Mead and Bateson.
2. Proxemics may be the best known of extant theories and methods pertaining to the movement field. Started (like kinesics) by an anthropologist, E.T. Hall, as a result of his extended applied anthropological studies carried out for the American Foreign Service, the approach from proxemics deals with a theory of spatial interaction between two or more persons. The proximity of

persons is of chief interest, for it is postulated that there are measurable 'zones' (socially or culturally established) surrounding individuals that are generally out-of-awareness, but that influence daily interactions greatly. It is unfortunate that so much interesting and valuable work had to be tied to the notion of 'critical distance; in animals. For more thorough discussion, see Hall (1966 and 1966a).

3. A 'semiotic approach' to the study of movement is not, like kinesics, proxemics, or semasiology, a developed theory and methodology that is meant to treat human movement per se. A 'semiotic treatment' of human actions simply means a scientific study of movement or 'behaviour' as signs. In Mead's definition (see Sebeok et al, 1964), the term derives ultimately from John Locke's 'semiotike': 'the business whereof is to consider the nature of signs the mind makes use of for the understanding of things, or conveying its knowledge to others'.
4. The term 'semasiology' and its derivatives are from a Greek source and can be defined as 'signification' in the sense of 'meaning + logy'. In the late 19th c., the word was used to refer to that branch of philology which dealt with the meanings of words. It seemed a particularly apt term for a theory and accompanying methodology that is designed to deal, ultimately, with the meanings of body languages. In contrast to some 'semiological' approaches, that purport to deal with the sign functions of machines and/or the movements of animals and the like, semasiology limits itself to the human domain, hence the different term. Semasiology is based on an application of Saussurian ideas to human movement and the result is a theory of human actions that is linguistically tied, mathematically structured and empirically-based -- but not 'behaviourally-based'. Semasiology is a form of semantic anthropology. For more thorough discussion, see Williams (1982).
5. In 1909, Hertz published his now classic essay, "The Pre-eminence of the Right Hand", considered to be the pioneering work on dual symbolic classification from which the works of scholars like Needham, Cunningham and others have developed. The theme of anthropological scholars interested in dual symbolic classification is not examinations of 'the dark side of humanity' or simple formulations about right 'versus' left; front versus back, and the like, but the conviction that polarity and opposition are basic to human expression. For more thorough discussion, see Needham (1973).
6. Briefly, the development of a 'personal anthropology' means the recognition of unconscious operations and judgements on the part of an investigator. Examination of these over a long period of time permits certain patterns to emerge, the awareness of which leads to different relationships of investigator and subject and investigator and the report(s) that he or she makes on others. 'The Idea of a Personal Anthropology' was the title of a paper first read by David Pocock at the Decennial Conference of the ASA in 1973. In 1976, I applied these ideas to my own work, with the result that pedagogically, Pocock's suggestions are taken very seriously in semasiology.

7. Semasiology explores, uses and exploits a linguistic analogy to human movement to the full. Movement is seen as analogous to spoken language in important ways, not as an accompanying 'infra-structural' support system of some kind that is 'para-linguistic' or 'extra-linguistic'. That is to say that there is no arbitrary separation made between movements or gestures, spatial orientation, spatial context and the capacity for language-use. Semasiology does not affirm an ultimate biological explanation for all human action. It proceeds from a different definition of what a human being is, for a start, and it proceeds from different ontological and epistemological assumptions than are held by its rival theories.
8. For a more thorough discussion of what these structures amount to, see Williams (1977).
9. For '≡' read 'is equivalent to'; for '≠' read 'is not equivalent to'; for '≡df' read 'by definition'; for '≡int' read 'by interpretation'; for '≡cxt' read 'by context'. For '.' read 'and'; for '=' read 'equals'; for '≠' read 'not equal to'; for '¬' read 'denial of'.
10. We do not here refer to political 'freedoms', economic 'freedoms' and the like. We have assumed up to now that no one thought we did, yet, subtle tensions continue to exist. Those who are unfamiliar with their bodies, or their body's actual capacity for movement are likely to be puzzled by our insistence on defining its expressive articulatory limits. Those who wish to see the dance as the realm of unbridled 'spontaneity', 'freedom' and all the rest may, of course, do so -- but at their own risk of displaying hopeless naiveté to all who are well aware that the apparent 'freedom' is only achieved through discipline and constraints that are extraordinary. The 'expressive' character of the dance, like its physical features, is similarly constrained, i.e. idioms of body language each possess unique expressive characteristics -- but enough of this; we trust the point is now clear.
11. The total number of degrees of freedom of the whole semasiological body as stated in 'Deep Structures' (Williams, 1976) is falsified. It was deliberately falsified because the author is interested in 'keeping track' of developments in the field that, however unintentionally, may try to 'out-historicize' the originators of semasiology. The problems arise, of course, when students at a graduate level begin to 'calque' one system of theoretical explanation onto another and where subsequent variations on an original formulation causes the first to 'drop away' during the process of concentration on the second. In one way of looking at it, it is simply easier to express new terms or new ideas without any reference to their sources. Usages are frequently dependent on memory, which actually enters into the question of the development and survival of a new theory, fallible though the memory may be. For example, it often happens that persons with good memories as e.g. those who have taken complete notes or who have taped a year's lectures or conversations are 'out-historicized' by people who have not, or by those who forget the processes and influences through which their terminologies developed or who have a tendency to assume new definitions easily -- or, those who

actually put their own interpretations into the originator's mouth. The case is even more obvious, of course, with people who are able, through some academic, economic or political 'fluke' to get facile versions of a theory published before its originators, hence the deliberate falsification mentioned above. Through this device, it can at least be proven for posterity where the original ideas came from.

12. À propos of the above, it is necessary to acknowledge the considerable influence of Dr. Rom Harré on semasiological theory through his insistence on an 'anthropomorphic model of Man' (Harré, 1971:33-37), and the considerable intellectual debt he is owed through our usage of his (and colleagues') arguments concerning the 'nature, powers and capacities' of human beings (see Harré and Madden, 1973).
13. The inverted commas set the term 'cause' apart in this context owing to these kinds of considerations:  
 "Philosophers have long been accustomed to making a distinction between the relation of cause and effect on the one hand and the relation of ground and consequence on the other. The first is factual and empirical, the second conceptual and logical. Before the distinction became current, it was often ignored or blurred -- particularly by the rationalist thinkers of the 17th century...Perhaps all causal relations are factual. But, quite certainly, not all factual relations are causal..." (von Wright, 1971:34).  
 The point is that 'causal explanation' as it is usually understood in the behavioural sciences cannot be calqued onto semasiological explanation without severe distortion and subsequent misunderstanding.
14. The necessity arises here to draw attention to Ardener's work and thought regarding the terms, 'paradigm/syntagm', since what he has said is, I find, virtually unknown in the U.S. The first relevant reference is 1971:lxxxviii. The second directly related commentary is to be found in 1971a:446-447. I have no way of calculating the influences, which were considerable, of Ardener's thought on semasiological theory but a certain 'lineage' is being established here, therefore the 'genealogy' must be kept straight. Semasiology is rapidly taking root in a country where the work of British post-structural anthropologists (i.e. the semantic anthropologists) is, on the whole, inaccessible, thus I ask that my attempts to keep the record straight will be met with indulgence.
15. In this example, we see one kind of clear example of 'homokine', defined on p. xxi, i.e. A ~ =cxt B; a kind of homokine because the hand positions 'look alike', but they do not 'mean alike'. Moreover, they are not members of the same system or the same cultural context.
16. According to Pike, culture-free features of the real world may be called 'etics'. This designation thus includes 'behavior' minus intentions, rules and the like, but 'etics' can also include features of the system that are "not truly culture-free", but that seem to have been derived from the examination of more than one culture, or to "the sum of all the significant attributes in the folk classifications of all cultures" (Sturtevant, 1969:477).

The major exponent of an 'emic-etic' approach to the study of the dance and human movement is Adrienne Kaeppler. Only two of her many valuable contributions are listed here (1972 and 1978), and we cannot give a facile definition of the approach she uses. Suffice it to say that, like a 'semiotic treatment' the term 'emic-etic' approach indicates a general linguistic-anthropological approach to the study of culture and was not designed to handle movement per se. However, Kaeppler is the spokesman for the ethnoscientific school in the field of human movement studies and it is to her that we must address questions about the relation of her theoretical approach to movement and its grounds and consequences.

NB: Thanks are owed to Ms. Dixie Durr for the transcription into Labanotation of the soldiers on Highway 66, the passing motorcar and all the rest.

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