ON STRUCTURE IN MARTHA GRAHAM TECHNIQUE,
WITH COMPARISONS TO AMERICAN SIGN LANGUAGE

The main concern of this paper is to compare and contrast the structures of two examples of 'body language', Martha Graham Technique (MGT) and American Sign Language (ASL). Attention is focused upon the visual-gestural mode of communication, which is common to both systems.

Although they both are seen to be sub-sets of the semasiological notion of the set 'body language',1 MGT is a dance idiom and ASL is a language. They are not seen to be the same kind of entity or to accomplish the same kind of communication. However, the discovery of structural similarities and differences is believed to provide evidence in support of the assumption that these idioms warrant the status of cognitive, rational activity that is generated through the human capacity for language use.

History

For the benefit of those who have little or no familiarity with either MGT or ASL, a brief historical account of each is included here, as well as mention of my involvement with each.

Martha Graham Technique: MGT is an American Modern Dance technique that is ultimately tied to the dance repertoire out of which it developed, although in the context of this paper it is treated as a separate entity. Martha Graham broke away from the dance traditions of her direct predecessors, Ruth St. Denis and Ted Shawn, in 1923, rebelling against their work. She was also in rebellion against the precepts of ballet. Her goal was to create a new way of dancing that would express ideas and concerns that were of utmost importance to her. The theoretical concept of an imagined 'box' formation within which the ballet dancer moves was too constraining for Graham; the emphasis upon exterior line and airborne grace seemed too superficial. Denishawn's movement and thematic content was derived from Eastern dance forms and did not answer Graham's need for the kind of 'personal expression' she sought.

After initial choreographic offerings in which she gradually shed her Denishawn influences, she began to create something original. At first, she did away with many fundamental concepts of ballet, including 'turnout' (outwardly rotated legs), the pointed foot, rigidity of the torso and the covert struggle against gravity. These she replaced with parallel legs, the flexed foot, a harsh contraction/release principle for the torso and a giving into the floor, as well as overt struggles against gravity. Other aspects of her initial concept of a 'look' on the stage represented radical departures from the norm: her dancers wore stark white facial makeup, bloody-looking lips and blackened eyes, and dark straight long dresses. Dances were often accompanied by Louis Horst's sparse musical scores.

Over time her art went through various stages of development, manifesting diachronic changes: she adopted an appearance and...
movement approach that was more theatrical and less harsh; various principles of ballet technique crept in as she began to make use of ballet-trained dancers, and as she revised her ideas about expression and dance.

My involvement with MGT began in 1969 with professional training. By that time, such additional concepts as 'spiral', moving on the 'up-beat' and the use of 'turnout' were firmly established within the technique. Masterpieces such as Appalachian Spring (1944), Diversion of Angels (1948), Errand into the Maze (1947), Clytemnestra (1958), Seraphic Dialogue (1955) — and many others were mainstays of the company's repertoire when I entered as a soloist in 1973. I refer in this paper to MGT as I learned it from my teachers, who were second generation Graham dancers, including Mary Hinkson, Helen McGeehee, Bertram Ross, Ethel Winter and the well-known teacher of MGT, Kazuko Hirabayashi. We will be concerned with the last fifteen years of a technique that is roughly 55 years old.

American Sign Language: ASL is only about 100 years older, and for a language, is really comparatively quite young. Its history is usually traced back to the French Abbé de L'Épée who, in the late 1700's attempted to create a signed version of spoken French. He did this in the interest of aiding two deaf sisters with whom he lived to read and write French. He learned their signs for various objects, and then attached his own invented "methodical signs" which introduced the structure of French grammar. He founded a school for the education of the deaf, which was known as the National Institution for Deaf-Mutes, and this signed French was taught. His successor, Abbé Sicard, realized that Épée had failed to teach French grammatical structure effectively, yet he did not realize that French Sign Language (FSL) had one. Signed French continued to be used to analyze French sentences.

Thomas Gallaudet came from the United States to the Institution in 1815 to study with an accomplished pupil, Laurent Clerc, who taught him signed French. They returned together to the United States in 1816, and Clerc learned English. Together they secured funds to establish the first permanent school for the deaf in America, which opened in 1817 and was called the American Asylum.

Clerc taught signed English in the school, but outside the classroom "their own peculiar mode of expressing their ideas by signs" (Gallaudet, 1819), or ASL, was being used and was developing. It gradually became clear that merely translating a French or English sentence into signed French or signed English did not facilitate comprehension of it by deaf persons, and that it made more sense to explain the meaning of a sentence first in FSL or ASL. By 1835 signed English was abandoned and every teacher of the deaf was required to master ASL, which had grown by accretion as deaf students came to live in close proximity with one another upon the advent of schools for the deaf.

During the course of slightly more than 150 years since the initial standardization of ASL, however, there has been constant debate over manual and oral modes of communication and education for the deaf. Many of the arguments for oral methods and the use of speechreading are made by hearing educators and policymakers. Since around 1845, the view that speech is superior to signs in the education of the deaf has predominated. However, in the past 20 years or so there has been a movement toward the advocacy of Total Communication -- the simultaneous use of all available modes --
as well as abundant new research by linguists into the structure of sign languages. (See Frishberg, Klima and Bellugi, Stokoe, Wilbur, to name only a few.) It is in the light of this ground-breaking research that sign languages of deaf people over the world are now given recognition of their status as languages, and that deaf people are beginning to be thought of as rational, intelligent human beings.

I was involved with intensive studies of ASL for nine months in 1981. During that time I also became involved with various members of the deaf community in New York City through internship and volunteer programs. The disparity between my knowledge of MGT and ASL is great, however, I learned enough to be able to conduct the preliminary investigations which this paper represents.

Myths

Both ASL and MGT (and American Modern Dance in general) have suffered because of several myths. With regard to ASL, they have been explicitly stated and explained as myths by linguists; with regard to American Modern Dance, they are found explicitly and implicitly in much dance literature, not stated as myths but as truths. The following series of myths taken from Lane, H. and Grosjean, F. (1980) could be considered equally appropriate by inserting 'MGT' or 'dance idioms' in the place of 'ASL' or 'sign languages':

**MYTH:** Sign language is universal.

In fact, the first grammar book on FSL, put together by Remy Valade in 1854, ascribed to what linguists called the 'nature theory' of language. This suggests that the words, or signs, of a language bear some 'natural', relationship to objects in the 'real world'. Klima and Bellugi (1979:21)4 have pointed out that although there is sometimes a degree of iconicity between signs and referents, however, signs are not universally the same, nor would they be understood by a non-signer on the basis of their iconicity. The same is true of dance idioms such as Graham's. One would not expect that a Bharata Natyam dancer could attend a Graham concert and understand what she saw unless she were a 'speaker' of Graham technique as well.

**MYTH:** Reality must be word-based.

"ASL is in this respect no different from spoken languages, because the principal function of language is to convey concepts. However, in a sign language concepts are represented by signs rather than words" (Lane and Grosjean, 1980:2 - underline supplied). And in 'body languages' concepts are represented by action signs.5

**MYTH:** Signs are glorified gestures.

"To a person unfamiliar with ASL, signs may appear to consist of random hand and body movements accompanied by various facial expressions ... [this] indicates a serious misconception. The analogy would be to describe a spoken language one does not know, as 'noises' made with the
Linguists find striking similarities between the structure of spoken and sign languages in spite of the difference in transmission... Signs are made by combining simultaneously handshapes, orientation of the palms, movements of the hand(s), and their location on or near the body (Stokoe, 1960)...

There are formational rules that specify the possible combinations for signs in ASL. Combinations that violate rules are considered to be impossible ASL signs, although they may occur in other sign languages... Regular patterns of change have been observed and described by linguists" (Frishberg, 1975) (IN Lane and Grosjean, 1980:3 -- all underlines supplied).

MYTH: Sign language is concrete.

"One of the most popular myths about sign language is that although ASL can express concrete concepts, it is restricted in its capacity to deal with abstract ideas. However, as in oral languages, sign language has the flexibility and the creative processes necessary to invent new vocabulary as it becomes needed" (Lane and Grosjean, 1980:4 -- underline supplied).

MYTH: ASL is ungrammatical.

"Because ASL consists of movements made in space, signers refer to particular people or things whether they are physically present or not, by pointing, or by shifting their eyes to a specific point in space... directionality... location" (Lane and Grosjean, 1980:6 -- underlines supplied).

The Sign In ASL

William Stokoe's Sign Language Structure (1960) marked the first serious effort toward a structural description of the basic lexical units of ASL. "Stokoe observed that ASL signs are not just uniquely and wholly different from one another and posited that they can be described in terms of a limited set of formational elements that recur across signs" (Klima and Bellugi, 1979:40 -- underline supplied).

He showed that this set of formational elements consists of three major parameters: handshape, location and movement. Later analyses by Battison (1973) and Battison, Markowicz and Woodward (1975) revealed additional 'minor parameters': contact region, palm orientation and hand arrangement.

The Signing Space: The total signing space describes a circle, or heart, that is bounded by the waist, top of the head, and not quite a fully extended arm's length to the sides. Thought of more realistically in three dimensions, signs can be made in a half-sphere, with the signer's body representing the dissecting plane.

Major Parameters

Handshape: ASL handshapes are referred to as 'primes' and 'sub-primes'. While it is generally agreed that there are 19 primes (see Figure I)\(^6\), the number of subprimes varies from 36 to 40. In all ASL signs, the hand(s) must form one or two of these 36 to 40 handshapes.
FIG. 1

drawn from Klima and Bellugi (1979)
Location: Within the total signing space there are 12 distinct locations where signs are made: (1) Zero, or the neutral space in front of the torso, (2) the face, whole head, (3) upper face, forehead, brow, (4) mid-face, eyes and nose, (5) lower face, chin, (6) side of face or cheek, temple, or ear, (7) the neck, (8) the torso (i.e. from shoulders to hips), (9) upper arm, (10) lower arm and elbow, (11) front of wrist (palm of hand faces up), (12) back of wrist (palm of hand faces down).

Movement: The movement parameter has been accounted for in terms of 24 distinct types. These can more conveniently be described in terms of five categories plus four additional individual types of movement: (1) vertical action: upward, downward, and up-and-down; (2) sideways action: rightward, leftward, side-to-side; (3) horizontal action: toward signer, away from signer, to-and-fro; (4) rotary action: supinating, pronating, twisting; (5) interaction: convergent, divergent, contactual, linking or grasping, crossing, entering, interchanging. The additional four movements are opening, closing, nodding or bending and circular.7

Minor Parameters

Contact Region: The contacting region refers to the part of the hand that contacts another body part. The meaning of a sign can be changed completely just by altering the place of contacting. These regions include the thumb tip, palm side of hand, back of hand, fingertips, index side of hand and ulnar side of hand.

Palm Orientation: Orientation of the hands refers to the direction the palm faces. Minimal pairs can be shown to differ in only this one feature, e.g. the signs CHILD and THING. The only difference in the signs is that in the sign CHILD, the palm faces down and in the sign THING, the palm faces up.

Hand Arrangement: Hand arrangement refers to the number of hands used to make a sign, and the relationship between the hands. There are three possibilities for this arrangement: "... about 40 percent of the signs in DASL (the Dictionary of ASL) are made with one hand only ... 35 percent are made with two hands active and moving ... and 25 percent are made with one hand acting on the other as a base or locus ..." (Klima and Bellugi, 1979:48).

It has been shown that signs can be minimally distinguished by virtue of variation in only one of any one of the major and minor parameters, so that the parameters represent the constituent formational elements of ASL signs. The concentration of lexical content is in the hands. However, grammatical information is found in facial expression, head and body tilts, and eye gaze. It is also found in 'aspect modulation' -- dynamic changes in the movement quality of a sign that make it possible to alter the form of a verb or to otherwise qualify the action of a verb.

There are generative rules for the production of signs. Two of them are the dominance and symmetry constraints. The dominance constraint states that if two hands are used and only one moves, the non-moving (non-dominant) handshape must either match that of the dominant hand, or assume
one of the six most frequently appearing handshapes (/A/, /B/, /5/, /G/, /C/, /O/). The symmetry constraint states that if two hands move in a two-handed sign, the handshapes must be the same, and the location or plane used must be the same (Klima and Bellugi, 1979:63-4).

The Action Sign In MGT:

Although the categories are not the same as those used by linguists in a constituent analysis of ASL (i.e. the significant shapes made by the body in MGT are not called 'bodyshapes'), it will be useful here to keep such a fictitious category in mind if only to stress a major point of this paper: action signs in MGT are selected from the same theoretical set of possible movements for the human body, and they exist in the same four-dimensional space/time continuum with reference to that body, as the signs of ASL. The specific sub-sets of signs and the specific bounded spaces particular to each idiom are different, as are the sets of rules that govern each idiom. A thorough semasiological analysis of both idioms would provide the theoretical framework necessary for a statement of the comparison in truly equal terminology.8

The Form Space:9 MGT uses a large space -- usually a classroom with minimum dimensions of 20' X 35'. With reference to the body, all the space surrounding the body is used. There are no limits on the space that can be used in any direction, although use of the space behind the dancer's body is somewhat more limited than use of space in front of the dancer's body.

Body Classifications: The Graham dancer's body is divided into six significant categories of movements or shapes: torso, head, hands, feet, arms, legs. Figure 2 is a list of all the possible positions or movements that are permissible in MGT at the kinemic level.10 That is to say that the body parts mentioned must be in one of the positions or movements listed for that body part, or one cannot say that Graham technique is being used.

**Table:**

<table>
<thead>
<tr>
<th>Torso</th>
<th>Hands (continued)</th>
<th>Legs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full contraction</td>
<td>Flat, spread</td>
<td>Parallel</td>
</tr>
<tr>
<td>Pelvic contraction</td>
<td>Winged</td>
<td>'Turned out'</td>
</tr>
<tr>
<td>One-sided contraction</td>
<td>Clawed</td>
<td></td>
</tr>
<tr>
<td>Full release</td>
<td>Heel protruding</td>
<td></td>
</tr>
<tr>
<td>High release</td>
<td>Fist</td>
<td></td>
</tr>
<tr>
<td>Spiral (entire torso)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiral (waist up)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'On the spine'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Broken'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pointed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-demi flex</td>
<td>Sickled semi-demi flex</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hands</th>
<th>Arms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cupped</td>
<td>'Pressed'</td>
</tr>
<tr>
<td>Open cup</td>
<td>Angular</td>
</tr>
<tr>
<td>Flat, closed</td>
<td>Round</td>
</tr>
</tbody>
</table>

Figure 2
The most significant body part is the torso, and two movement principles for the torso dominate the technique: contraction/release and spiral. The formal relationships between these principles may be expressed as follows:

\[
\begin{array}{ccc}
\times & \bullet & \circ \\
+ & - & + \\
- & + & - \\
+ & - & + \\
\end{array}
\]

\[\text{Figure 3}\]

In other words, one must be in either a contraction or a release, but not both; in either case one may or may not be in spiral. The set of movements this rule relationship generates can be elegantly proposed in the expression of a Klein group:11

\[\begin{array}{ccc}
\times & \bullet & \circ \\
\longrightarrow & & \longrightarrow \\
\longleftrightarrow & & \longleftrightarrow \\
\end{array}\]

\[\text{Figure 4}\]

One can go a step farther in constructing the following table of relationships, which does not represent as hard a generative rule as the one for \(\times/\bullet\) and \(\bullet/\circ\), but represents a tendency toward certain correlations between kinemes:
The circled pairs are examples of instances where, say, if one's head is 'broken', one must be in a contraction, but if one is in a contraction, one's head may be either 'broken' or 'on the spine'. Thus all correlations are not reciprocal, nor are they hard and fast rules. In general, however, these relationships refer to the dimension of IN/OUT (or open/closed) that governs the technique and that is central to Graham's philosophy of movement.

'Grammatical' Rules Of MGT

As we have begun to see, there are rules in MGT that govern the generation of kinesemes, or whole danced movements. These are seen to be comparable to dominance and symmetry constraints and similar rules in ASL, and are not rules for spatial orientation, movement dynamics or sequence of movements:

1. One must be in either a contraction or a release.

2. One can:
   A - Contract to move
   B - Release to move
   C - Move in a sustained contraction
   D - Move in a sustained release
   E - Move from contraction to release to contraction, etc.
3. Contraction or release of the pelvis must occur before movement in the rest of the body.

4. Movement in the body occurs from proximal to distal portion of body part, successively.

5. Movement of the pelvis through space occurs before transfer of weight from one body part to another.

6. Spiral occurs in the body when one or both legs are found not to be within the coronal plane of the body:
   A - Usually, spiral is toward the leg that is forward of the other.
   B - Another type of spiral occurs when one leg moves toward 'second' (to the side of the body) from a closed position (legs together), and then the torso spirals in the opposite direction from the extending leg.

7. Movement occurs slightly before the beat.

8. The center of gravity/weight is continually in motion.

If one does not adhere to these rules while dancing, one's movements cannot be said to belong to the Graham idiom.

The Graham Technique Class

The Graham technique class is constructed so as to develop mastery of movement in five basic categories on the UP/DOWN dimension. They are: (1) on the floor -- seated or supine, (2) on the knees, (3) standing (both in place and moving through space), (4) in the air, and (5) 'the falls', which are taught at all vertical levels, the ultimate 'fall' (the 'standing back fall') making use of three levels (standing, seated, supine -- and back to standing). One more category, used only occasionally now, is movement 'at the barre'.

The floorwork introduces every kinematic element that is necessary to movement at the other levels: contraction, release and spiral for the torso; 'face to ceiling' ('broken') and 'on the spine' for the head; cupped and stretched hands; flexed and pointed feet; angular and rounded arms; parallel and 'turned out' legs. In fact, they are introduced within the first five exercises and everything that follows is a development in theme and variation form.

Every seated exercise is named, and usually the name describes the movement principle to be stressed throughout the exercise in a way that agrees with the philosophy of the technique, as for example: (1) 'opening of the leg' -- not ballet's développé, which it resembles, but 'opening'; the open/closed (or IN/OUT) opposition is central to MGT. (2) 'deep stretches' -- this refers to the principle of elastic, continual and cyclical movement; the body stretches both toward and away from the body's center.

Most movements performed in the second half of a class, as well as some entire combinations, have names as well. These are named either according to some philosophical concern in the technique (i.e. 'knee
vibrations', 'strikes') or to some metaphorical relation (i.e. 'butterflies', 'bison jumps'). Sometimes ballet terminology is borrowed (i.e. 'piqué step step', 'attitudes to the floor').

**Meaning In MGT**

The movements and movement 'utterances' one learns in the classroom are not specifically meaningful until they are used in the context of a dance, or in a long sequence created for advanced work toward the end of an advanced or company class. This is not to say that they have no meaning taken on their own. Just as in English the word /cat/ generally denotes a cute furry animal commonly taken in as a domestic pet, the 'back fall' can similarly be said to have a general meaning of its own -- though not of the word-based and specific nature of spoken or sign languages. Yet, the meaning of the English word /cat/, the ASL sign FINISH, or of a Graham 'back fall' is limited until it is placed in an English, ASL or MGT context:

**A. English:**

1. The cat ate the rat.
2. It was raining cats and dogs.
3. That cat was bad!
4. What a catty remark!

**B. ASL:**

if

1. ROOM CLEAN FIRST FINISH // GO-R CAN#  
   "You can go if you clean your room first"
2. TRY FINISH // WORTHLESS#  
   "I've tried, but it's no use"
3. SILLY FINISH#  
   "Stop being silly!" or "Don't be silly!"
4. WORLD TRAVEL FINISH INX-R#  
   "He's been (traveled) all over the world"

**C. MGT:**

1. Back fall in Errand into the Maze (The Woman)  
   (momentary overwhelming and recovery)
2. Back fall in Night Journey (The Chorus)  
   (transition from standing to knee level sections of movement)
   (in awe of and respect for St. Michael's command)
4. Kneeling back falls in Deaths and Entrances (First Sister)  
   (inevitability and doom)
In ASL, the movement of a sign (repeated in place, repeated in space traveling, circular, continuous, etc.) can alter the meaning of the sign. So can the dynamics of the movement (quick, slow, sustained, sudden stop, etc.). Certain patterns of dynamic, directional and temporal variation in the movement of signs have been distinguished as representing specific grammatical and semantic significance (i.e. aspect modulations). Similarly, such variations in the movements of MGT action signs can alter the meaning of an action sign from one context to another, as in the example just given.

The Notion of 'Code'

Dance idioms do not convey 'word-for-word' meanings. There may be a 'basic message' that is conveyed through the idiom itself. However, dance idioms are capable of conveying fairly more specific concepts in the form of dances than this general 'message'. While one cannot 'read' a dance as one can a book, it can be 'read' in a way appropriate to the idiom's mode of communication, if and only if one is familiar with its 'code'.

The notion that communication takes place through dance idioms tends to be brushed over or taken for granted as truth. However, if one does not know the 'code' of MGT, is one really seeing or recognizing the Graham idiom as distinct from, say, Merce Cunningham's idiom, or any other American Modern Dance idiom? Perhaps the difference is understood by dancers in this country. But to a dancer of a radically different idiom or to a non-dancer these American idioms might "all look the same!".

The issue may become clearer when stated in terms of spoken language: if a person who does not speak Chinese listens to a native speaker of Chinese, does he or she really hear the same thing that another Chinese-speaker hears? Again in terms of dance idioms, if one does not understand another's dance idiom, and is furthermore made to feel that it is not directly explainable because it is too mysterious and private (i.e. it cannot be talked about or analysed, only experienced) what kind of 'communication' can one expect to participate in as an audience member at a performance of that idiom?

Summary

It has been found that a comparison of ASL and MGT reveals structural similarities that are seen to be shared characteristics of body languages. They both make use of selected sub-sets of all the theoretically possible human movements that can be performed by the human expressive body. The elements of these sub-sets consist of ordered movements that are governed by rule-systems. The rule-systems include notions of ordered space (both internal and external to the body instrument) and time, as well as rules for dynamics and syntax. The rules constituent to each idiom must be known and followed if one is to produce 'utterances' in that idiom.

The most important difference is that ASL is a language and MGT is a dance idiom. The kind of communication is therefore different.
One cannot, for example, have a conversation in MGT in the same way that two ASL-signers can; conversely, neither are ASL-signers dancing when they converse. However, there is evidence that suggests that similarities may be found at the semantic level as well as a structural level.

Proceeding from the premise that cultural meanings are embedded in body languages, as they are in spoken languages, the field of social and cultural anthropology will find itself enriched by including body languages as a part of the data in research.

Diana Hart-Johnson

NOTES

1. In semasiological theory, the term 'body language' applies equally to dance idioms, rites, ceremonies, sign languages, martial arts and other systems of human movement. This sub-set (body language) is seen to overlap slightly with another sub-set: spoken language. Both sub-sets belong to the set: language.

2. Since 1950 various sign systems have been constructed to aid in the teaching of spoken and written English to deaf students. 'Signed English' was developed in the 1970's for use with preschool and elementary school children, and includes sign markers for tense, plurality, possession and other basic English grammatical structures. This should not be confused with 'signed English', which is an imprecisely defined use of ASL signs and English syntax, without invented 'methodical' signs used in other constructed sign systems that attempt to replicate spoken English. In this paper, however, the term 'signed English' does not refer to either of the recent systems mentioned above, but is simply intended to indicate that a signed version of spoken English was taught.

3. The equation of hearing and speech with rationality goes a long way back. Aristotle, in 355 B.C. said that those "born deaf become senseless and incapable of reason" (Cannon, J.R., 1981:xxv). Other arguments have had to do with the origins of language, and place the existence of sign languages -- often equated with gesture in the everyday sense of the word -- prior to that of spoken language, following the outdated belief that humankind evolved from a savage to a civilized state. Naturally, this kind of argument puts sign languages and 'savages' in the same category.

4. Their example shows that the signs for 'tree' in American Sign Language, Danish Sign Language and Chinese Sign Language are completely different from one another. Although each is iconic, each would be unintelligible to a signer of the other sign languages, or to a non-signer.

5. The term 'action sign' is used to establish (1) a connection to the Saussurian notion of the linguistic sign, i.e. the relationship between 'signifier' and 'signified', and (2) the idea that the movements of body languages are intentional and are employed by
human agency. For a fuller discussion, see Williams (1979), 'The Human Action Sign and Semasiology'.

6. Stokoe (1960) established a notation system for ASL that includes letter and number identification of the primes and subprimes that corresponds to the manual alphabet and ASL signs for numbers. In Figure 1 this notation is found above the drawing of each sign.

7. For a fuller description and examples of the three major parameters, see Stokoe (1960), Klima and Bellugi (1979) and Wilbur (1979).

8. Structural invariants for all body languages have been posited and set forth in various formal models by Williams. These structures provide a real basis for cross-cultural, or intra-cultural comparison of body languages, whereas usually one is faced with a virtual comparison between chocolate and fire engines. For a complete discussion of semasiological theory, see Williams (1975a NB:49-119).

9. This term in semasiology refers to the bounded space within which the dance event takes place. The form space differs greatly from one culture to another, and is as valuable a part of the meaning of a dance as the dance itself.

10. In semasiological theory, the 'kineme' is the smallest meaningful unit of gesture, thought of as being analogous to phonemes in spoken language. These 'units' vary as dictated by the data under investigation and are always relative to the larger components (i.e. kinesemes, danced phrases, whole dances, etc.) of a dance idiom.

11. For a lucid explanation and discussion of the Klein group and its relation to ethnology and the social sciences, see Barbut (1966) in Lane (1970).

12. See footnote 10. Also, see Williams (1975a:29), and Williams (1976:Part I passim).

13. These examples are taken from Fant (1980:17; 37; 176; 205).

14. These interpretations are the author's and are not meant to imply a dictionary type of translation.

15. The use of this term refers to the complex sets of rules and meta-rules that are constituent to body languages. Until these are known, one does not have access to the meanings that can be transmitted through body languages. If a body language were acquired during training or study (similarly to spoken language acquisition during childhood), knowledge of these rules would be implicit. Usually, however, such rules are made explicit to a large degree during the course of training. Certainly in an analysis of the kind proposed herein, one of the principal aims is the discovery of the rule-structures.

16. Unfortunately, a large proportion of dancers in the West would prefer to regard themselves as being in the possession of a 'private knowledge' of their art. That is, the dance can be
experienced but not explained. Yet the dance must be identifiable by public criteria in order for any understanding or communication of it to take place. For a thorough exegesis of public/private, objective/subjective arguments, see Best (1979, NB:214).

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