The Potential of Movement Analysis as a Research Tool: A Preliminary Analysis

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Scholarly studies explore dance from many points of view. They may focus on the historical development of a dance form, examine the context in which a particular dance event occurs, explore the background of those who dance and how this relates to social structure, or explore the movement process itself—the dancing. While all approaches to the study of dance provide potentially meaningful data and insights relating to the role of dance in its socio-cultural context, the heart of dance is the movement. Dance research that ignores the dancing (except for very broad descriptive statements) ignores a major component that has potential for revealing a great deal about those who create and use dance.

American researchers who have explored the movement process[1] have, on the whole, worked independently (of each other or of other research projects), without working toward developing a widely understood methodology for examining dance movement and exploring its potential uses in other dance research. While such studies contribute to the knowledge of specific dances or dance forms, they overlook the need for common tools necessary for cross-cultural and comparative studies. To allow for the most meaningful research to be carried out, a discipline must develop tools and methodologies that have a certain consensus of validity and broad applicability. Only through use of such research procedures will it be possible to interrelate apparently diverse studies and evolve broad concepts relating to dance as human activity.

In 1979 this research project was initiated to explore the potential uses for employing movement analysis in dance research. The project was based on three assumptions:

1. the Labanotation and Effort/Shape systems of movement analysis originated by Rudolf Laban and subsequently developed by others can form the basis for meaningful movement research in the field of dance;[2]
2. a team approach would facilitate input based on the many facets of these two systems and minimize potential individual bias resulting from individuals' tendencies to focus only on one system, or on specific components of one of the systems, in their own educational development and research;
3. work on a particular task, rather than abstract discussions not directly related to concrete applications, has the greatest potential for contributing to the development of meaningful research tools.

The project participants set out to work toward the development of techniques for utilizing movement analysis in dance research by examining and analyzing a selected item from the repertoire of the Mōhiniyāṭṭam dance genre of southwest India. Research was funded by a grant to project coordinator, Judy Van Zile, from the University of Hawaii Office of Research Administration. The research team comprised seven individuals with diverse backgrounds in movement analysis and dance.[3]

The group met approximately two hours a day for five weeks during January and February, 1980, and worked individually on specific tasks as needed. Sessions were divided between working on analysis of the selected item of dance and discussing the work procedures and emerging techniques. The original project design was rather loosely structured. The project coordinator felt a need to provide specific tasks at the outset to avoid concentration on abstract theoretical discussions, but at the same time to allow sufficient freedom for the direction of the project to follow the problems and needs that developed. Thus, many sessions were exploratory in nature. This open-endedness resulted in the articulation of a number of areas of concern, some of which were explored in detail; others, owing to time constraints, were explored in less detail or simply left as identified areas of concern.

The following pages include an explanation of procedures used during the project, conclusions relating to Mōhiniyāṭṭam based on the repertoire sample analyzed, and suggested methodological considerations for future research.

I. GENERAL OBSERVATIONS

The dance item known as Cholkeṭṭu, from the repertoire of Mōhiniyāṭṭam, was selected for analysis. (See section II, Mō-

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This article was completed prior to the death of Irmgard Bartenieff. Based on recommendations from readers during the review process for publication a number of changes were subsequently made. These changes, however, were primarily editorial in nature, and did not in any way affect the substance of the article as approved by Ms. Bartenieff. The publication of this article is respectfully and lovingly dedicated to Irmgard Bartenieff.

Since the original writing of this article the Laban-Bartenieff Institute for Movement Studies has changed the designation of their area of study from Effort/Shape to Laban Movement Analysis. The original designation—Effort/Shape—has been used throughout this article.

Labanotation autography by Irene Politis.

hiniyāṭṭam, for explanation of this choice.) Research began with observations of Cholkeṭṭu as performed three times by the informant. (See note 3 and the end of section II for details on the informant.) Wearing a type of dress used as daily attire in the state of Kerala (and loosely approximating the costume worn in performance of Mōhiniyāṭṭam) the informant performed in a dance studio to the accompaniment of tape recorded music.[4] Two of the performances were video taped and, based on the informant's evaluation, one was selected for repeated viewing during subsequent research.

The project coordinator asked researchers to record their general observations after each of the three viewings. They were not told to what purpose these observations would be put, nor what form they should take; they were simply requested to record what impressed them. This was done entirely on an individual basis; there was no discussion or explanation of what was being viewed beyond an indication that it was a dance form of India known as Mōhiniyāṭṭam. The observations were filed for subsequent use.

After several weeks of repeated viewing of the dance, discussion, and detailed analysis, a need was felt to return to the general observations. Researchers felt they were becoming immersed in a level of detail that possibly obscured important broader features that may have been initially observed. The original general observations were reviewed to isolate features that struck the observers during initial viewing of the dance. Reviewing the observations revealed that a number of features had been noted by more than one observer. Similar observations were grouped under appropriate headings, giving the precise wording used by individual observers. The resulting chart, which summarizes features observed by three or more individuals, is found in Appendix A. Initials following statements are those of the observer, and may be used to relate the nature of the description to the background of the observer. (See Note 3.)

Returning to the original observations and comparing them via the chart showed a number of significant elements. Such observations were considered an important part in the early stages of the research process. They provided each individual with an orientation to the material to be analyzed, unencumbered by categories established in advance (as happened when an attempt was made to use an existing coding sheet). General observation (i.e., recording a first impression, "what stands out," "what strikes me") allows for use of the observer's best skills to record whatever comes to mind without worrying about potentially misunderstood concepts and terms and without feeling a need to include everything.

The general observations were primarily narrative in form—sentences, phrases, paragraphs, that grouped together the observer's initial reactions. These reactions seemed to be of three major types:

1. *interpretive emotional responses* (e.g., "sensuously flirtatious casting an inner spell—'I know and you will be taken in'");
2. *descriptions of movement* (e.g., "overall frontal orientation," "head movements are part of the constant playing with changing relationships of limbs and parts of limbs—forearm/hand/fingers," "lower body strong direct—stable state," "lots of transitions in time and flow—mobile state");
3. *general summary images* that were either interpretive, descriptive, or a combination of these two (e.g., "arm movements suggest a mandala world surrounding the dancer full of contrasting activity").

The different types of observations made, together with similar and different details noted, pointed to several important considerations.

Preferred Perspective. Because team members came to the project from varied backgrounds, they saw the dance through different "filters" and different features appeared to be important. (See types of observation responses delineated above and compare specific statements under major headings in Appendix A with background of researchers in Note 3.) An awareness that any observer comes to a research situation with a preferred perspective influenced by training, experience and personality is an important research consideration. Recognizing and understanding these preferences is crucial (e.g., "I tend to see structure first even though other more qualitative things are influencing the statement," or "I tend to tune in to the expressive elements first and do not immediately see the structure that supports them"). One of the most important attributes of a researcher is clear knowledge of favored perspectives so that when collecting and processing data an attempt can be made to counterbalance potential biases. Total elimination of biases is the ideal towards which scientific research strives. But little, if any, formal testing has been done to determine if individual biases influence inter-observer reliability among Labanotation and Effort/Shape practitioners. Hence, if aware of one's inclinations it may be possible to minimize their effects by taking steps to focus attention on elements that might otherwise be ignored.

Nature of Description. Sometimes observers saw essentially the same phenomenon and recorded it:

1. with different words using the same basic type of response (e.g., "details of extremities are very characteristic," "quick precise movements of fingers, eyes, feet");
2. using different types of observation based on one of the three categories delineated above (e.g., "a very clear feeling of 'this is the way it is, no doubts,'" "outstanding grounding in the vertical, connection to the floor at all times, phrases frequently end with held accents," "scooping with change of front").

This points to the importance of developing a common language in dance research to facilitate meaningful communication and clearly indicating the nature of description being used. This is not to suggest that a language be developed which would exclude or discourage personal imagistic ways of speaking or recording observations, but that these personal images could be translated, if necessary, into a commonly understood vocabulary.

Sequence of Data Gathering. During later stages of the project it became apparent that the type of observation one tends to prefer influences the order in which data are gathered, which, in turn, *might* influence final results. Within this project some observers preferred to analyze by beginning with the overall "feeling essence" and outstanding features of the dance and proceeding to the details of structure. Other observers tended to begin with the detail and see what emerged from the collected details in terms of clusters of information that might lead to an overall feeling. This raised questions regarding the effect on final conclusions of the order in which research is pursued. If you catalogue every tree and plant and variety of grass do you see that it is actually a forest? And if you call it a forest, will you miss the subtle differences in the flora that might make this constellation of trees, plants, and grasses different from other forests? Is the whole more than the sum of its parts? In all probability it is, and the development of a methodology that will reveal both is crucial. The best research sequence, which must also consider varying re-

search conditions, is an area needing further exploration.

General observation was begun entirely from a movement perspective. Researchers were provided no information on the nature or background of Mōhiniyāṭṭam. While this is rarely the way research would be done (and is certainly not a recommended practice), it was followed in this project because of the concern with developing analytical techniques based on culling information from movement. With this in mind, it was only after general observations and preliminary discussion and analysis that researchers were provided with the following information,[5] and dialogue between informant and researchers began.

II. MŌHINIYĀṬṬAM

Mōhiniyāṭṭam is a female dance form indigenous to the State of Kerala on India's Southwest coast. The lexical meaning of the word Mōhiniyāṭṭam provides a valuable clue to the art itself. *Āṭṭam* is the word for dance in Malayalam, the language of Kerala State. The Sanskrit word *mohini* means a fascinating woman; it is related to *mohana*, which means delusion, infatuation, temptation, seduction; a magical charm used to bewilder an enemy (Monier-Williams 1899:824-5). All of these meanings are reflected in the many stories about Mohinī in Hindu mythology.[6] In painting and sculpture, Mohini is often shown with her garments seductively clinging to her hips but on the point of falling away; sometimes male admirers are clustered about, gazing in fascination at this sensuous young lady who embodies all the canons of feminine beauty.

Traditionally Mōhiniyāṭṭam was performed only by women of the Nāyar community, a group of sufficiently high ritual status to permit them to perform within temple precincts. The three or four dancers of the Mōhiniyāṭṭam troupe traveled from village to village during the performing season (about January to the end of May). After a first performance at the local Bhagavati temple, they fulfilled paid engagements at the homes of wealthy landowners in the vicinity. Training and rehearsals took place during the monsoon season (about mid-June to the end of December), when again the dry season permitted the troupe to undertake performance tours. In addition to the dancers, the troupe comprised the *naṭṭuvan* (teacher, choreographer, conductor of the orchestra, as well as manager and artistic director), two or more musicians, and two men who helped transport the troupe's and individuals' belongings.

Mōhiniyāṭṭam was in the past not a sophisticated urban art, but rather a "popular theatre" of the villages. Although performed in the temple context as well as in the courtyards of wealthy families and nobility, and although texts of many of the items refer to the deities of Hinduism, its purpose was probably not exclusively religious.

The first item of the Mōhiniyāṭṭam performance was called Cholkeṭṭu. It is considered the most important item in the repertoire, is older than other items, and is of unknown origin. A Sanskrit *śloka* (prayer) dedicated to Śiva Naṭarāja precedes Cholkeṭṭu. (Movements in the score in Appendix D preceding numbered measures are executed in free rhythm while the *śloka* is being sung.) The Cholkeṭṭu text includes verses in praise of the Goddess Bhagavati, of Viṣṇu, and of Śiva, although most of the text consists of meaningless mnemonic syllables of the type found in many of India's dance and dance drama forms. Portions of Cholkeṭṭu were performed only by one or two of the dancers, although the entire troupe began and ended the piece. The repertoire also included *pada varṇams*, *jatisvarams*, *padams*, *tillānas*, and two pieces which

Clifford Reis Jones

The traditional Mōhiniyāṭṭam costume as it is usually seen today. Note that the dancers (Maxine Miska, Betty True Jones, and Linda Henzel of the Natya Yogam, University of Pennsylvania) perform in bare feet.

provided a kind of "audience participation."[7] Like other Indian classical dance forms, Mōhiniyāṭṭam comprises "pure" or "abstract" dance, which has no specific meaning, and "expressive" dance, which interprets a sung poetic text.

The Cholkeṭṭu of Mōhiniyāṭṭam has undergone change over time. Thus the piece chosen for analysis in this project is not "the" Cholkeṭṭu, but rather Cholkeṭṭu as taught by a particular teacher at a particular time, with some input from the informant's research with other Mōhiniyāṭṭam dancers who had also been a part of the tradition in their youth. Obviously a complete study of Cholkeṭṭu, or of the form known as Mōhiniyāṭṭam, would require the analysis of many more extant versions of the piece as well as extensive examination of other items of the repertoire. Since the major concern of this project was a study of the process and possible uses of movement analysis and notation, the more limited extent of the material examined was not inappropriate.

The informant's Mōhiniyāṭṭam teacher was Thottasseri Chinnammu Amma, student of Appuredath Krishna Panikkar of Korattikkara. Information was also collected from other sources, especially Kalippurata Kunhikkutti Amma. The Cholkeṭṭu analyzed represents the informant's understanding of this dance, based upon her research, and includes input from the two sources cited above as well as the Cholkeṭṭu taught at Kerala Kalamandalam during her study there.[8] Cholkeṭṭu was chosen for analysis because of the informant's belief that it genuinely represents Mōhiniyāṭṭam movement style.

III. CHOREOGRAPHIC OUTLINE

After detailed examination of preliminary observations, initial work on Labanotation and Effort/Shape scores, and an introduction to Mōhiniyāṭṭam (via reading materials and discussions with the informant), the researchers felt a need to examine the choreographic structure[9] of the dance as a whole at a level more specific than general observation but less specific than full notation scores. The characteristics emerging through such an examination would be helpful in maintaining a perspective on what the detailed scores represented, establishing realistic limitations for the project goals, and selecting specific writing methods for the full scores. Toward this end research-

ers embarked on producing a "general score"—a choreographic outline. This was to represent delineations of the major phrases and the outstanding features of each phrase.

Working from a video tape of a single performance, and information and demonstration provided by the informant, the researchers produced the choreographic outline in Appendix B. Through observation and discussion, a group consensus was derived concerning the beginning and ending of phrases and the outstanding features of each phrase. Phrase delineation was based on perceivers' notions of movements that appeared to be in some way related to each other and terminology reflected spontaneous impressions rather than an attempt to adhere to the vocabulary of a particular system of movement analysis. The reader should bear in mind that the outline represents the perceiver's point of view, not the performer's; it does not reflect phrasing conceptualization of the performer and/or the musical and choreographic techniques of the Mōhiniyāṭṭam tradition.[10] The informant was relied upon for clarifying certain movements (e.g., movements not clearly discernible from the video tape, movements that occurred quickly, delineation of similar but not identical sequences), but not for phrase delineation.[11]

Two types of units were delineated: large units that had a feeling of coherence, referred to as sections, and smaller units that seemed to have their own identity and yet clearly be a part of the larger sections, referred to as subsections. An attempt was made to describe both types of units in two ways:

1. a broad description of what was actually happening;
2. a summary image that expressed the overall feeling or most striking feature of the unit.

The summary image sometimes represented a factual statement of the most important structural or dynamic component of the movement (e.g., "carving and flowing," "spoking"), and sometimes an impressionistic image, a statement that could be preceded by "it reminds me of...," or "it looks like..." (e.g., "waving wheat," "hostess offering"). It became apparent, however, that both a broad description and summary image did not seem appropriate for all sections and subsections. In some cases a specific description of what was happening seemed to be most important, in others the summary image seemed to be most important, and in others clear verbal statements appropriate to what the group sensed as being important were difficult to find. (This difficulty reinforces the necessity for development of meaningful vocabulary for use in dance research.) Hence, no attempt was made to find both types of descriptions for all sections and subsections when they could not be found without undue attention to unimportant components.

In articulating the choreographic outline, inconsistency in terminology became apparent. "Phrase" and "motif" are perhaps among the most frequently used terms, but their meanings vary widely among dance researchers (as well as researchers in other fields in which one or both is used, such as music, literature, and the plastic arts). Meanings become further confused when considering "motif writing," another form of movement documentation based on principles originated by Laban.

The researchers agreed that in observing movement something gives the perceiver a sense of "unit," and "units" of varying sizes can be distinguished. It is interesting to note that with five observers there was no difficulty in arriving at a consensus on where units began and ended, in spite of differing backgrounds and frames of analysis. Examination revealed that units had been delineated at a purely intuitive level. In attempting to find the basis for these intuitive decisions, a number of devices potentially usable as "unit markers" were articulated:

1. pauses;
2. re-initiation of effort (based on Effort/Shape concepts);
3. a contrasting use of effort (based on Effort/Shape concepts);
4. a change in movement density;[12]
5. a change in the use of joints (e.g., changing from a rotary emphasis to a contraction-extension emphasis).

This list is not at all complete. It does, however, point the way to an area of importance in movement analysis: in exploring a performer's rendition of a particular dance, the perceiver becomes aware of the grouping of movements (including their specific organization in spatial and dynamic pattern), and how this relates to the determination of style. The same type of delineation could also be done from the performer's/dance tradition's perspective, and the two versions could then be compared.

For purposes of this project, a hierarchy of terminology relating to choreographic form, from smallest unit to largest unit, was established: element/component, constellation/cluster, phrase, sequence, combination, subsection, section, part, dance.

An *element/component* is the smallest unit recognized by a particular tradition or observer. Except for the inclusion of the observer's perspective this is comparable to Kaeppler's "kineme": "significant movements,...elements selected from all possible human movements and positions...recognized as significant by people of a given dance tradition" (Kaeppler 1972:174). This could be a single Effort, a foot position, a waving of the hand, etc.

A *constellation/cluster* is a group of elements executed concurrently, such as the hand held in a certain position at the same time the head and one foot are held in particular positions, the hand waving and the head simultaneously turning, or a group of effort elements (such as "direct, bound").

The term *phrase* was the most difficult to define. In size it was felt to lie between a constellation (a single event comprising several concurrent elements) and a sequence (a series of events). In content it was felt to be a series of movements that encompass a definite statement or a complete idea (not necessarily narrative), and a sense of continuity through organization into a beginning, a middle, and an end.

A *sequence* comprises two or more phrases. Possibly a sequence is the unit length most comfortable for teaching purposes, the length of unit a teacher would present in a single class session.

A *combination* is two or more sequences; a *subsection*, two or more combinations; a *section*, two or more subsections.

A *part* is a major division in a dance comprising two or more sections. Parts are divided on the basis of a major thematic change, either in narrative content or movement.

The concept of *a dance* seems to be universal, although the parameters delineating what constitutes "a dance" seem quite diverse. However, the indicators pointing to the beginning or ending of a dance range from such things as an entrance and exit to raising and lowering a curtain, interrupting a ritual or drama to interpolate a dance, and pausing.

Larger units might include such things as a suite, a ballet, an evening program, and a performance season.

The hierarchy and definitions given above should be considered a working framework, and in no way definitive. As work progressed the need for considerable exploration of these ideas and terminology became obvious. It is not certain

that all of these terms would apply to all dance styles, or that they would be delineated according to the same criteria in each style. When using such terms in movement analysis, however, researchers need to indicate how these categories relate to each other and what their characteristics are.

The choreographic outline validated a feature noted during general observations: Cholkeṭṭu has a clear two-part structure. Most of Part I consists of pure (abstract) dance; the primary focus is on movement exploration for its own sake, although an overall mood may be suggested. Part II is expressive dance in that its major purpose is to interpret a song text. While not all researchers were aware of this traditional Indian categorization, all had a sense that Part II was "saying something specific," and all felt a clear difference between the nature of the movement in the two parts. Because of this difference, a decision was made to focus analysis on only Part I in an effort to more fully deal with a portion of pure dance.

The choreographic outline also helped to determine a point in Part I at which the detailed analysis could stop, since project time constraints did not allow for full examination of the entire dance. During general observations and beginning stages in the development of the choreographic outline, the frequent use of repetitions became obvious. This led to the belief that detailed analysis would be somewhat simplified. By the time the outline was completed, however, it became obvious that the units repeated were highly complex, and that not all of Part I could be completed during the time allotted for the project. Rather than arbitrarily stopping at the destination achieved at the end of the research time, researchers felt it important to stop at the end of a major unit within the dance. The outline is primarily a delineation of sections and subsections, with specific subsection descriptions often suggesting combinations or sequences. Thus, the outline proved helpful in delimiting the extent of the detailed analysis; the full analysis stops at the end of a section.

The choreographic outline began to clarify details of the formal structure of Cholkeṭṭu. It delineated such devices as:

1. the frequent use of repetition;
2. the variation of previously stated units of movement;
3. the different nature of the use of various body segments.

These devices could then be more fully explored through the detailed scores.

An important contribution of the choreographic outline was its articulation of the most striking features of movement sections. This proved a valuable aid when working on the detailed scores. It helped to maintain focus on important components and in many instances aided in the specific selection of writing methods; e.g., the summary image of "mandala circles" (measures 24^{3}-$27)^{13}$ contributed to the decision to include the Labanotation technique of design drawing in the full score rather than just the structural description that leads to the creation of the circular shape made by the chest through the fingertips moving together as a unit.

The summary images served as a helpful working vocabulary in referring to various sections and subsections in the research process. The reader should keep in mind, however, that the summary images are based on observer perceptions. The informant indicated that while these images seemed appropriate to the movement, as a performer she delineated larger units of movement, in many instances grouping together several subsections as sections without internal breaks noted by the researchers. This led to questions regarding the value of a choreographic outline. Is such an outline valuable as a tool in itself; does it provide meaningful information? Or does its value lie in its service as a means to an end for the researcher; does it suggest further steps to be taken in the movement analysis process? The researchers hypothesized that:

1. the summary images provided by a choreographic outline can begin to suggest the general nature of the dance without overloading the researcher with details;
2. the outline, alone or in conjunction with the detailed scores, may be valuable in delineating the "grammatical rules" underlying the choreographic structure of a dance and contributing to the stylistic elements of the genre of which it is a part;
3. summary images and the outline can be valuable aids to the researcher in the process of full movement analysis.

In short, the choreographic outline may be a valuable stage in the research process and may possibly prove valuable as a data source in itself.

IV. THE SCORES

After completion of the choreographic outline, researchers returned to fully notating the beginning portion of Cholkeṭṭu. Bartenieff and Hackney produced an Effort/Shape score and Wolz and Van Zile a Labanotation score. Bartenieff and Hackney also produced a Space Harmony score for part of the notated portion. (See Appendix C and D.)

The first problem arising in the notation process was how to determine precisely what version of the dance to notate. Two performances of Cholkeṭṭu had been "preserved" on video tape and the researchers had easy access to the informant, who was willing to perform any and all of the dance, as requested. Notating from the video tape would allow for the precise documentation of a single performance, but would entail problems in clearly seeing movements. Notating from repetitions by a live performer allowed for more clearly seeing movements, but created problems with small variations between performances, variations in both structural and Effort/Shape elements.

This problem led to a re-evaluation of the type of score needed based on its intended use. Notation scores were looked upon as "data," a source of information about the dance. A major project concern was developing methodologies to interpret the data; i.e., to discover what the data can tell us. Movement notation scores attempt to translate dance—either "the dance" or a specific "dance event"—into a form which can be isolated in time so that it may be examined in depth. Because this information is a *translation* of an event it cannot be considered *raw* data; it has clearly been "filtered" by the notator. Hence, a major consideration in writing a score and using it as data is the reliability of the score and an assessment of precisely what it represents.

Important to assessing the reliability of a score is knowledge of the notator's skill. Notation skill can be evaluated on the basis of:

1. the notator's ability to perceive what is happening, and
2. the notator's understanding of the notation system being used and ability to translate these perceptions into the language (concepts and symbology) of the system being used.

These two factors immediately point out problems. Does the notation (and its concepts) control the way we think about movement and, subsequently, how we perceive it? The basic frame of reference used for this project was Labanotation and

Effort/Shape based and hence potentially Labanotation and Effort/Shape biased. It will require parallel research carried out from different perspectives to determine the effect of particular systems of movement analysis on movement research.[14]

Another important consideration related to the notator's skill is how the notator's perceptions and "translations" relate to the conceptions of the performer/tradition.[15] For example, Figure 1 states that the arm is forward middle and flexed three degrees. Figure 2 states that the upper arm is forward right diagonal middle and the lower arm is forward left diagonal middle. Both descriptions may produce the same end product, but they reflect different emphases. The focus of an entire dance could be shifted based on decisions made by the notator in the selection of specific notation descriptions. It should be emphasized that the scores presented here are based on notation done by individuals unfamiliar with the tradition documented, influenced by the informant's understanding of what is important *within* the tradition. Considerably more training in movement analysis of native performers of various traditions is needed before problems related to native/non-native viewpoints can be more fully explored. (See Note 15.)

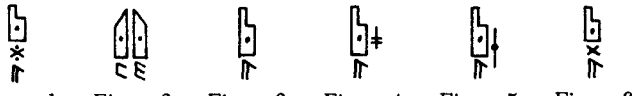

Figure 1 Figure 2 Figure 3 Figure 4 Figure 5 Figure 6

Related problems emerge in determining what a score represents. Ethnomusicologists classify music scores, based on linguistic concepts, as being descriptive or prescriptive. (See Seeger 1958.) Briefly, a descriptive music score is one which:

1. fully describes the precise events of a single performance;
2. implies objectivity on the part of the notator—the factual documentation of what transpired, without interpreting such things as meaning and importance based on the intent of the performer.

This implies notating an event *after* it has occurred. A prescriptive music score, on the other hand,

1. assumes knowledge of conventions of the performance tradition by both the notator and reader of the notation;
2. states the outline of the ingredients the performer needs to include in producing a performance expected by the composer.

This implies notating a desired event *before* it happens, and notation by the composer or creator.

In movement terms a prescriptive score might state that the arm is forward middle (Figure 3). In observing a series of actual performances (all of which may be perfectly acceptable to the style/culture/choreographer), descriptive scores might show such specific performances as the arm being basically forward middle but moved slightly so it lies on the center line of the body (Figure 4), the arm being just slightly below the normal forward middle placement (Figure 5), or the arm being forward middle and flexed one degree (Figure 6). The basic intent of the movement—its essence, what it is "about"—is forward middle. The context will allow for a certain range of variability in performance, so long as "forward middle" can be clearly perceived.

Wolz and Bartenieff question the validity of applying the concepts of prescriptive and descriptive to dance notation. In music, the composer (creator) usually writes the score. He has conceived how a piece should sound, he knows the tools for communicating with other musicians, and he notates what he feels will produce what he intends. In dance, on the other hand, a perceiver, rather than a choreographer (creator) usually writes the score. To what extent can a score written by a perceiver ever be purely prescriptive (i.e., represent the intention of the creator)? This raises further complex philosophical questions regarding the concepts of creator and performer in dance. To some, the choreographer is the creator and the performer a re-creator. To others, both are creators—one of the choreographic form and the other of the actual performance. (Further inquiry into these specific issues was beyond the scope of this project.)

Van Zile proposes that the type of score needed for analysis of individual differences within a style may indeed be descriptive—a highly specific account of precisely what happens in an individual performance. This type of score would also be useful in comparing different performances of the same dance, which would aid in delineating the acceptable range of variability within a style. She further proposes that what is needed to determine the core characteristics (see discussion of core characteristics below) of a dance style is what might be called a "modified prescriptive" score which attempts to identify the most important features of a dance by considering what seems to be the "essence" of various performances and the intent of the performer/choreographer/tradition.

In an attempt to identify core characteristics of Cholkeṭṭu and, potentially, Mōhiniyāṭṭam, the research focused on the production of a modified prescriptive score. The above definition of a prescriptive score was modifed by the fact that:

1. only one version of Cholkeṭṭu was notated;
2. the notation was based on one individual's understanding of the "essence" of that Cholkeṭṭu;
3. although a recognized scholar and performer of Mōhiniyāṭṭam (in India and the U.S.), the individual whose understandings are documented is not an Indian, but a Caucasian, born and raised in the United States. (This raises questions regarding the extent to which individuals can fully understand and translate into their own movement dance techniques from a culture of which they are not a member. These are important questions for future consideration.)

Thus the scores represent an attempt to be prescriptive, within the constraints stated above—the Cholkeṭṭu understanding of one individual who is an outsider to the tradition, as translated by four outsiders with various Labanotation and Effort/Shape perspectives. (The notation glossary may be found in Appendix C and the score in Appendix D.)

The score comprises a number of components, aligned on the page as follows:

Labanotation
Effort/Shape notation
Space Harmony notation (for first portion of notated segment only)
Choreographic Outline
Informant's indication of possible relationship to other dance forms

The first section of the dance, consisting of four unnumbered measures of unequal length, is a preliminary showing of respect, not considered part of the dance itself. This type of sequence is found as a prelude to performance in many classical Indian dance forms. In this instance the sequence is rhythmically free, the only requisite that the dancer must arrive at the starting position for the dance just prior to the music that begins the dance, and should do so in a fashion that is

neither too hurried nor too prolonged. The timing notated represents one possible manner of execution. Bar lines in this section represent phrases delineated by the researchers; the informant considers the section a single long phrase.

In the process of writing the scores an important point emerged regarding the relationship between Labanotation and Effort/Shape analysis. The combined knowledge provided by these two frames of reference often led to the clearest understanding of what was happening and, consequently, to the most meaningful notation method. The importance of this relationship led to the exploration of the possibility of integrating the Labanotation and Effort/Shape scores.

Some prior research has also been concerned with this issue (see, for example, Ohio State University 1976 and Gellerman 1978). However, while there is a recognition of the need for both types of information, scores are usually separated and simply laid side by side to allow the reader to interrelate when desired. Occasionally a few Effort/Shape symbols are appended to portions of a Labanotation score when this additional information is considered useful. Researchers for this project felt a need for real integration of information—a need to see, and subsequently think about and feel, for example, an arm and torso movement that creates a particular shape in a direct-controlled manner, rather than working on the shape and then adding the qualitative aspect or vice versa.

Toward this end, exploration was begun on integrating information into a single score. The first major dance phrase and a later phrase, with more visually complex notation graphics, were selected for this exploration. A number of conventions, or writing rules, needed to be established to deal with the integration (see Appendix E). With a slightly enlarged scale and an expanded staff the integration was found to be manageable (see Appendix F). The score seemed graphically readable and, through the major devices of addition brackets and Effort/Shape symbols as pre-signs, a great deal of information could be conveyed in a compact, integrated form. The methods established for these integrated scores need further testing to:

1. refine writing methods;
2. test the meaningfulness of such scores for use by readers not involved in the writing of a particular score.

The researchers believe, however, that integrated scores are potentially valuable in research (and, possibly, in reconstruction of dances from scores).

After the scores were completed, the researchers attempted to use them as a data base for articulating additional information. This information took two forms:

1. support and clarification of characteristics identified in general observations and the choreographic outline, and
2. delineation of previously unidentified characteristics.

Based on the information contained in the score, its support of previous observations, and the frequency of newly identified features, it became possible to compile a list of "core characteristics," structural and qualitative features that are specific to the dance segment analyzed, its "movement signature." The concept of core characteristics is felt to be the essence of what is meant by "style." This concept is based on the notion of core qualities originated by Bartenieff in her research with the Choreometrics project (Bartenieff 1980). The word "qualities" however was changed to "characteristics" in order to clearly indicate the inclusion of both structural and qualitative elements. The characteristics delineated are listed in Appendix G. The chart is rather lengthy and may appear cumbersome to use, but the major categories established are considered potentially usable for comparisons within and between styles. Further, an examination of the details stated within the categories leads to a recurring theme, a theme that perhaps summarizes the distinctiveness of the dance segment analyzed:

> a dance of contrasts with an extremely high level of orchestration between multifaceted components.[16]

The analysis presented is based entirely on movement elements because of the project's concern with movement analysis tools. The full examination of any dance genre or individual dance, however, must also include an analysis of the music to which it is performed: the text, melodic structure, rhythmic structure, and music-movement relationships. (See Note 4.)

V. SUMMARY AND CONCLUSIONS

This research project accomplished a number of results:

1. it delineated core characteristics of a dance excerpt from the Mōhiniyāṭṭam repertoire of South India (see Appendix G and A. Core Characteristics);
2. in doing so, it evolved techniques for the use of movement analysis that may prove meaningful in future research (see B. Methodological Techniques);
3. it explored concepts considered important in movement analysis research (see B. Methodological Techniques; and C Future Considerations);
4. it identified areas of concern that require future exploration (see C. Future Considerations).

A. Core Characteristics

Appendix G articulates the core characteristics observed. Of what use is this information? First, such information constitutes the beginning of the identification of the distinctive features of the dance item known as Cholkeṭṭu. It identifies some of the characteristics that differentiate this from other dance items within and without the same genre. This information also provides a beginning in the identification of the core characteristics of Mōhiniyāṭṭam, the delineation of the movement signature of the dance genre itself.

In notes made during her field research in India the informant wrote:

> The movements of Mōhiniyāṭṭam should never cloy; an over-emphasis on *lāsya* (softness) will not be at all correct. Neither is it intended to be over-vigorous. The choreography has movements which are crisp, others which flow in a legato manner. It requires an approach which might be described as "controlled energy"; the movements must have a quality that is positive but not bombastic. It should have a delicacy and lightness.

This statement and researchers' comments during early general observations evinced a high level of agreement. One might then ask: with such agreement at preliminary stages, what is the value of subsequent in-depth analysis? The informant's statement and related researchers' comments are of a general descriptive nature. The in-depth analysis seeks to articulate at a more factual level precisely what contributes to creating these impressions. Many dances might be described as "enticing," or having movements that are sometimes "crisp" and that sometimes "flow." In-depth analysis can reveal the potentially different ways in which these impressions may be created.

For example, early observations characterized the movement as enticing and indirect. An examination of the score reveals that there is virtually no indirect movement in the segment notated. What happens, then, to create such an overall impression? Closer examination points to indirectness created through "orchestration"—the way in which individual body parts relate to each other, and the way in which movement is "passed" from one body part to another. For example, in the third measure the stamp initiates movement and the torso action follows slightly later; also, a stamp slightly precedes the culminating torso action. While there is much clarity in precisely where each body part is going, there is an overall sense of indirectness about the whole that is perceived by the viewer. Thus, detailed analysis explains and gives credence to general observations and grounds interpretations in the "facts" of the dance rather than personal generalities.

The reader should keep in mind, however, that while the characteristics identified mark the beginning of a style analysis of Cholkeṭṭu and Mōhiniyāṭṭam, they relate specifically only to the dance segment analyzed. Similar analyses would be necessary of a number of versions of Cholkeṭṭu and of many other items in the Mōhiniyāṭṭam repertoire before the characteristics of the dance genre could be conclusively stated.

Detailed analysis can provide data not only for illuminating the reasons for arriving at specific interpretations of movements in a dance, but also for re-examining these movements in light of subsequent research, and for relating dance to other elements of a culture. As indicated earlier, Mohinī is often described in Indian literature as a seductress. Representations of Mohinī in painting and sculpture reinforce this idea. The translation of "seductress" in the movement medium, in the segment of dance analyzed in detail, is in terms of indirectness. It may also be in the specific combination of the Effort/Shape elements of weight, flow, and space, a combination Laban felt created a "spell drive."

Indian literature describes the "sidelong glances" associated with feminine beauty, an element found literally in the dance segment analyzed.[17] An examination of the score reveals the frequent use of the eyes: sometimes the face and eyes focus in the same direction; sometimes the eyes glance sideward as the head remains stationary or focuses in a different direction.

The importance of the eyes in Indian dance is stated in the *Abhinayadarpaṇam*, a text believed to have been written sometime between the 5th and 13th centuries:

> Where the hand goes, there the eyes follow; where the eyes go, there the mind follows; where the mind goes, there the *bhāva* [emotional mood] follows; where the *bhāva* is, there arises the *rasa* [emotional mood as it is perceived and enjoyed by the spectator]. (adapted from Ghosh 1957:46, 85)

Thus it appears that an examination of dance movement in relationship to literature and other expressive media could contribute to the understanding of broad cultural elements.

Detailed movement analysis can also contribute to historical information. The informant believes Mōhiniyāṭṭam to be related to other South Indian dance genres, particularly Kai Koṭṭikaḷi, Kathakaḷi, and to a lesser extent, Bharata Nāṭyam. She believes that a few specific items of the repertoire are related to Kathak dance of North India. (See notated score for informant's indications of specific relationships of sections of the dance segment analyzed.) If full movement analyses were available of all these traditions, notation scores could be placed side by side and would probably reveal movement relationships that would aid in tracing historical development of dance genres.

B. Methodological Techniques

During the research a number of techniques were evolved that should be tested further for validity in other research projects.

1. *General Observations.* General observations were felt to be an important stage before undertaking detailed analyses. Recording features that initially strike the researcher in a manner comfortable to the researcher and appropriate to the dance form can prove valuable in later stages. In using such information at subsequent stages however one must be aware of preferred perspectives and how these color initial and later observations.

2. *Coding Sheets.* In the early stages of research an attempt was made to use a coding sheet developed at Ohio State University. The coding sheet was set aside because of a lack of complete understanding of the terminology employed (and what appeared to be inconsistencies), and its exhaustiveness. The coding sheet forced researchers to consider a tremendously large number of factors, many of which were virtually irrelevant to the genre being examined. Researchers felt compelled to examine everything and began to focus on elements insignificant to the dance form. Such a checklist could be important in later stages of research to ascertain whether any areas had been overlooked, but it proved too cumbersome in early observations, and could have biased observations by leading viewers to specifically watch for categories of characteristics established in advance. Additionally, for checklists to be usable the terminology they employ must be clearly understood by users.

3. *Choreographic Outline.* A choreographic outline can be a valuable technique contributing to several ends:

1. articulating units of movement of various time lengths (from perceiver's and/or dancer's/tradition's perspective);
2. delineating the syntax of choreographic form (which can then be examined in greater detail with fully notated scores);
3. aiding in notation decisions when several options are available.

4. *Integrated Scores.* Integrated scores may prove to be the most valuable notated data base. The proximity of related information can contribute to greater ease in gaining a sense of the whole, rather than requiring the reader to attempt the integration. The level of detail provided by such scores is important in research and may also prove useful for reconstructing dances. Highly specific scores can also provide data usable by others. Later researchers may wish to examine features not explored in the original study. Subjective verbal descriptions would not allow for this in the same way as detailed scores.

C. Future Considerations

Analysis of the Cholkeṭṭu excerpt also brought out a number of important points.

1. *Score Reliability.* When using notated scores as research data, the researcher must assess the reliability of the scores and know precisely what they represent. The researcher should be familiar with qualifications of the notator, including notation skill level and familiarity with the tradition being notated. The nature of the scores, particularly as related to such criteria as descriptive/prescriptive viewpoints (see Note 15) must be determined.

2. *Terminology.* The concept of phrasing is of great importance and may hold a key to stylistic discrimination. While a beginning exploration was undertaken here, there is need for

considerable research in this area, to identify significant concepts and refine terminology. There is an on-going need in movement analysis research to come to grips with terminology. Researchers must work toward the development of a commonly agreed upon vocabulary and, until achieved, must clearly define the manner in which they are using terms.

3. *Order of Data Collection.* A potentially significant area only touched upon here is the significance of the order in which different types of data are collected. Does this order influence research results?

4. *Point of View.* A final area also only touched upon here is the relevance of native/non-native and performer/perceiver concepts to notated scores. Does the point of view make a difference in the data produced?

5. *Space Harmony.* It should be noted that the analysis was originally intended to include Labanotation, Effort/Shape, and Space Harmony. The latter, however, was included only for the opening section. Although the choreutic (Space Harmony) intent was considered very important, Hackney and Bartenieff felt a need for a more universally systematized way of recording such general spatial statements as "emphasizing the feeling of vertical plane." At this point there is no consistent symbology for representing such a spatial statement without stating each movement separately. This is another area requiring further exploration.

This research project has explored the potential for movement analysis as a research tool; it has also raised many questions. The time has come for the fuller development of broadly applicable techniques for more completely understanding dance movement. There is a need for continuity in the development of analytic techniques, a need to draw on the widest expertise possible. A team project such as this has many advantages. Each researcher contributes individual skills and experiences that stimulate other team members to think in new ways. This diversity also contributes to minimizing biases and placing various points of view in clearer focus. The greatest disadvantage of team endeavors is time, a "beast" that can only be partly tamed when a sufficient number of projects have been accomplished to allow us to see shared and absent features. Team projects are, however, extremely beneficial to the individuals involved, and such endeavors may be important contributions to the training of researchers. The most meaningful research will be the product of significant tools and well trained researchers that bring together a detailed understanding of specific behaviors and the broader cultural context of a given area which lead to insights into why and how people dance as a form of cultural and individual expression.

NOTES

1. Pforsich (1978) has outlined some of the major American projects in which various aspects of systems originated by Rudolf Laban and developed by others have been applied. But many more projects have been done, some of which are not easily accessible to other researchers. These have taken such forms as student class projects, Effort/Shape certification projects, theses, and short-term group projects. Further, few Americans appear to be familiar with related projects undertaken by European researchers—sometimes owing to language barriers and difficulty in gaining access to foreign publications. (An over-view of related research in Hungary may be found in Kürti 1980. This article also contains references to four English language articles on Hungarian dance research. Material contained in Kürti was not utilized in this project because the article appeared after research for this project was completed.) Studies have also been done using movement analysis systems other than those originated by Laban. There is a tremendous immediate need for the compilation of an annotated bibliography and for the publication in a single volume of studies making the most significant contributions toward the development of a methodology of movement analysis for dance research.

2. As indicated in Note 1 above, other systems of movement analysis have been used in research. The intent of this project, however, is to explore potential uses of one system rather than to compare various systems. For a full explanation of Labanotation see Hutchinson 1977; for Effort/Shape see Dell 1970.

3. The following is brief biographical information about members of the research team. Only information on knowledge and applications of movement analysis, familiarity with Indian dance, and other background relevant to project tasks is provided. Other scholarly and professional qualifications are not indicated.

Betty True Jones (informant) combines firsthand knowledge of the techniques and performance of many classical dance forms of India with research and study of their background, history, and textual materials. Prior to this research project she was not familiar with any formalized system of movement analysis.

Irmgard Bartenieff (researcher) pioneered the development of Rudolf Laban's concepts of Effort/Shape and Space Harmony in the United States. She established the Effort/Shape certification program and founded the Laban Institute of Movement Studies. A member of the International Council of Kinetography Laban, she has a broad knowledge of world dance traditions, to which she has applied her movement analysis abilities (in part, as a member of the Choreometrics project). She has also applied her skills in the area of dance therapy.

Peggy Hackney (researcher) is a certified movement analyst who assisted in the development of the Effort/Shape certification program. She is a certified Labanotation teacher and co-authored several Labanotation texts. She has applied movement analysis knowledge in her own work as a professional modern dancer, in the training of modern dancers, and in staging dances from Labanotation scores. Prior to this project she had no knowledge of Indian dance forms.

Judy Van Zile (researcher) is a certified Labanotation teacher. She is a fellow of the International Council of Kinetography Laban and a member of the organization's research panel. She has had experience notating several Asian dance forms and, based on field work in India, has done an extensive analysis of a dance from the Bharata Nāṭyam tradition. Although familiar with many Indian forms, she had never seen Mōhiniyāṭṭam prior to this project.

Carl Wolz (researcher) is a certified teacher and notator of Labanotation and a member of the International Council of Kinetography Laban. He has had experience notating several Asian dance traditions (primarily Japanese), and staging dance from notated scores (primarily ballet and modern dance). Prior to this project he had a general knowledge of Indian dance.

Megan Llinos Jones (student assistant) was selected for project participation on the basis of her general secretarial skills, basic knowledge of Labanotation that would allow her to serve as a score copyist, and a background in Benesh notation (certified teacher) and dance ethnology. Prior to this project she had taken classes in the South Indian dance form, Bharata Nāṭyam. Although not officially a "researcher" with the project, her input and observations were included because of the nature of her background.

Carl Hefner (student assistant) is experienced in video taping and audio-visual documentation of Asian dance. Prior to this project he was not familiar with Indian dance.

4. A thorough study of any dance should include an examination of the music to which it is performed and relationships between the music and movement. Because of time constraints a full movement-music relationship analysis was not attempted. A simple scanning of the score, however, clearly shows the use of shifting accents (particularly obvious in the changing beats on which stamps occur) and changing relationships between the length of movement phrases and the length of musical measures.

5. Most of the following remarks on Mōhiniyāṭṭam are taken from

Jones (1973), and are based on information collected during several years of study and research in the field (1959-62, 1965-66, 1968-69), with the help of a wide range of informants. Research during 1965-66 was supported by a grant from the Fulbright Program and, during 1968-69, by a research grant from the American Philosophical Society (Penrose Fund).

6. In the best known of these stories, at the time of the churning of the milky ocean by the Devas and the Asuras (the gods and their enemies) to secure the *amṛta* (nectar of immortality), Viṣṇu took the form of Mohinī, that is, of an enchantingly beautiful young woman. By clever deception Mohinī gave all of the *amṛta* to the Devas; so charmed were the Asuras by her seductive smiles and bewitching glances that they did not even protest (Sanyal, n.d.:30-38).

7. These items were the "mūkkutti item" (in which the dancer enacted a little scene with one of the male members of the audience) and the "candanam item" (in which she passed through the audience, applying the fragrant sandalwood paste called *candanam* to the foreheads of the patrons, receiving money from them in return).

8. Kunhikutti Amma remembered a number of verses (*stotras*) interpreted in gesture in the latter part of Cholkeṭṭu which had apparently disappeared from Chinnammu Amma's repertoire. A number of changes occurred in the version of Cholkettu taught at the Kalamandalam during the informant's study there. Thus, the informant selected from these versions and combined variations in a way she felt justifiable within the tradition. If detailed analysis of the choreographic nature of Cholkeṭṭu and stylistic differences between different versions of this piece were desired, the versions taught by each source could be delineated by the informant.

9. Choreographic structure refers here to how a dance is ordered, and includes qualitative elements (such as Effort phrasing) and quantitative elements (such as body part usage). Both the structural use of the body and the qualitative way in which movement occurs are considered integral parts of choreographic structure. One dance genre may be set apart from another by its highly articulated use of the fingers instead of its single-unit use of the entire hand. But it may be equally important that a free-flowing arm movement is always concluded with an abrupt binding of the action in the wrist. Thus, both structure and quality must be considered in examining how movement is ordered in dance.

10. Van Zile has become increasingly concerned with differentiating conceptualizations of the performer/tradition from those of the perceiver/audience in presentational traditions. Are conceptualizations by these groups the same or different?

11. In spite of the fact that the informant is herself a recognized dance researcher and was fully aware of the total nature of the project, researchers experienced difficulty in wording requests carefully to avoid biasing responses. The potential of biasing responses by inappropriate questions, and focusing attention on otherwise unimportant movements, became very apparent. The manner in which data are solicited can greatly influence (and skew) the data collected.

12. See statements under TIME in Appendix G for some preliminary observations on movement density. This notion was felt to be an important concept warranting further examination, beyond the scope of this project. For one researcher's working definition of this term see Van Zile, 1983.

13. Throughout this paper a superscript number following a measure number refers to a count within that measure; e.g., 24^3 refers to count 3 of measure 24.

14. During the time of this project Bartenieff had the opportunity to observe students in an Effort/Shape class. Several of the students had previously had no Labanotation training, two had had Benesh training, and the remainder had had no prior movement analysis training. Based on this and other observations, Bartenieff feels that the specific "language" used for movement analysis does not affect the development of perceptual acuity—any good training in movement analysis contributes very positively to the development of perceptual skills.

15. This is related to anthropological concepts of etic and emic research. For a discussion of these concepts see Pelto and Pelto 1970: 54-65.

16. Examining Appendix A and B in relation to the notion of contrasts reveals a variety of ways in which contrasts are achieved in the dance segment analyzed (stated in both impressionistic and more literally descriptive terms).

smooth, relaxed ease	vs.	controlled precision
soft flowing upper body	vs.	rhythmic stamping feet
large sweeping movements	vs.	small intricate gestures
subtly enticing	vs.	factual, didactic
"you are invited"	vs.	"this is the way it is"
free-flowing sensuality	vs.	a strictly ordered stable world
mobile eyebrows, alert eyes	vs.	a held half-smile
upper body	vs.	lower body
carving, scooping	vs.	piercing
inward sensing	vs.	outward focus
parallel upright 1st position	vs.	low turned out 2nd position
slow	vs.	fast

17. Several examples illustrate the many references to "sidelong glances" found in Indian literature.

> Her glances first came hesitant and sidelong,
> then soft and shy with love;
>
> . . . . . .
>
> The fawn-eyed maid with dancing brow and turning face
> for long cast sidelong glances at me
>
> . . . . . .
>
> Placing a hand behind her hip and turning gracefully her waist,
> her breast drawn back and chin held close against her shoulder,
> She cast at me lovingly two or three sidelong glances
>
> . . . . . .

The first is by Bhavabhūti, the second is believed to have been written by Rājaśekhara, and the third is anonymous (Ingalls 1965:182, 180, 179).

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APPENDIX A

Most Frequently Observed Characteristics During General Observations
(with specific examples of how such observations were worded)
(Letters in parentheses are initials of the individuals who made the observation. See Note 3 for names of individuals.)

Contrasts
—dance of contrasts (MJ)
—alternations of moods (PH)
—a complex network of messages (IB)
—alternating calm and exciting activity; alternation of slow, fast, changing density (CW)
—lilt, burst, lilt, burst (JVZ)

Highly Orchestrated
—(many systems in) constant playing with changing relationships of limbs, parts of limbs (forearm, hand, fingers) (IB)
—oppositional interplay (JVZ)
—segmented use of body parts (IB, MJ)
—every body part knows what it should "say"; many systems (PH)
—everything moving, sometimes against each other (MJ)

Overall Frontal Orientation (this precise wording was used by JVZ, CW, MJ, PH)
—arms sagittal/frontal, never behind body (MJ)
—basically presentational (CW)

Sense of Uprightness
—being vertical through the center (PH)
—stance is erect, but easy and relaxed (CW)
—grounding in the vertical (IB)
—fairly upright (MJ)

Carving and Directional Movement (based on Effort/Shape terminology)
—shape change is mainly directional goal orientation or carving and making volume in space visible (PH)
—much movement carves out space and is then punctuated by small piercing, cutting accents (JVZ)
—many movements that seem to sculpt, "shape" the space around the dancer in a multitude of curved lines and volumes; however, there were also one-dimensional back and forth straight lines that had a definite focus (CW)

Detailed Use of Extremities
—adding details in the extremities (hands); facial gestures, eyes, eyebrows, and neck movements (CW)
—hand movements are very precise; precise movements of fingers, eyes, feet (MJ)
—hand/fingers in complex relationships to facial changes in the eyes; clear emphasis on whole arm, forearm, hand (IB)
—very alive distal ends . . . eyes and face important (PH)
—oppositional interplay of hands (JVZ)

Rhythmic Stamping
—stamping gestures with strength and suddenness; drumming-like gestures with legs and feet into floor (IB)
—foot rhythms: stamping with the foot or parts of it; changing density in rhythmic patterns of feet (CW)
—feet as musicians (stamping rhythms) (MJ)
—a sense of "nearness" in the lower body; strong, sudden (PH)

Stable Lower Body
—powerful strength connection with the ground; lower body strong, direct (PH)
—weight is low and supports seem very solid (CW)
—connection to floor kept at all times; legs-feet maintain downward accents (IB)
—unusual knee spread for women (JVZ)
—open low positions in second; nothing off the ground (MJ)

Mobile, Successive Upper Body
—going with the flow, singing an inner song (PH)
—rolling/sequential (in torso and hands) (JVZ)
—upper torso used to accommodate the arms or as a follow-through succession of transfer of weight (CW)
—body flows throughout (MJ)

Upper Body Explores Space
—feelings of "look at this" in an almost pointing way or a sweeping mobile arm gesture delineating a whole spatial area (PH)
—arms use greatest range and much variety; planar, spiraling, some axial: scooping arm movements (JVZ)
—arms describe arcs . . . suggesting a kind of mandala surrounding the dancer; turning . . . which creates a three-dimensional spatial pattern with arms (CW)
—upper body uses large and small excursions into space, counter-melody to lower (IB)

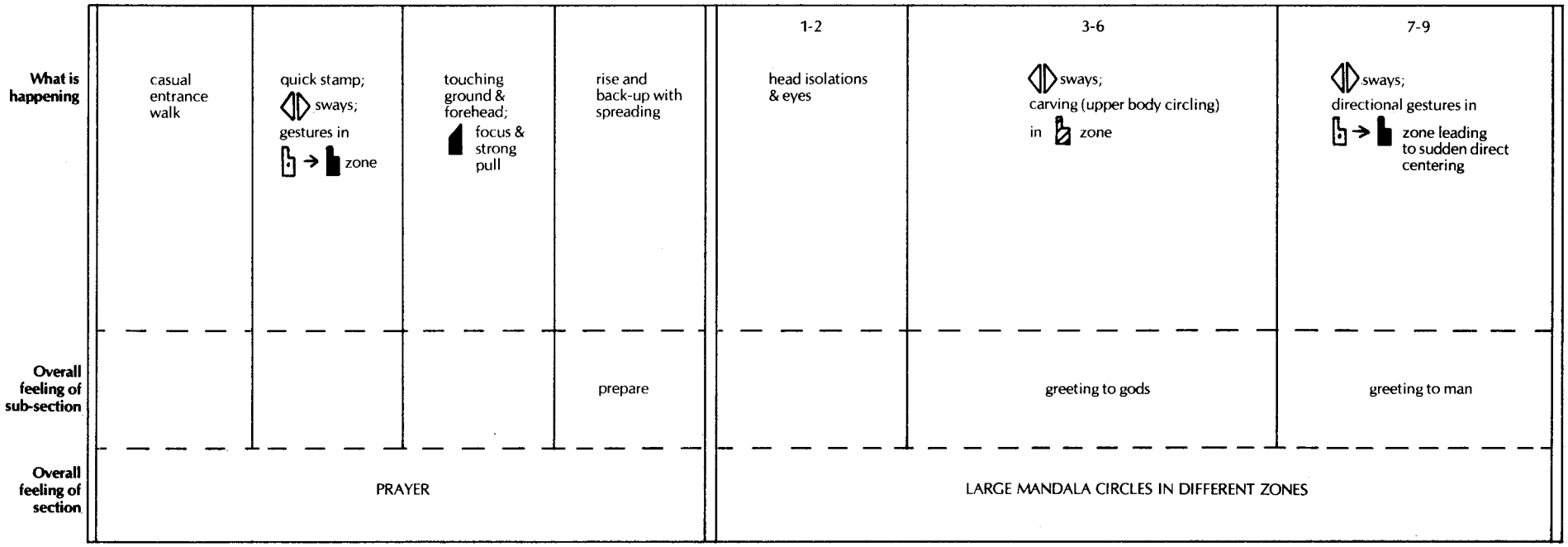
Spatially Ordered (not vague)
—definite boundaries; the world is ordered and you exist within that order and clarity; planal work is mainly in the vertical (door) plane or the sagittal (wheel) plane, and there is quite a bit of using the whole cycle in a flowing way and accenting the dimension (PH)
—architectural; emphasis on lateral and sagittal planes (CW)
—dance built on clear right/left (symmetry) with preferred excursions into the horizontal and sagittal (IB)
—many bilaterally symmetrical repeats: arms often rest on table-top forward or opened: torso plays in lateral plane (JVZ)

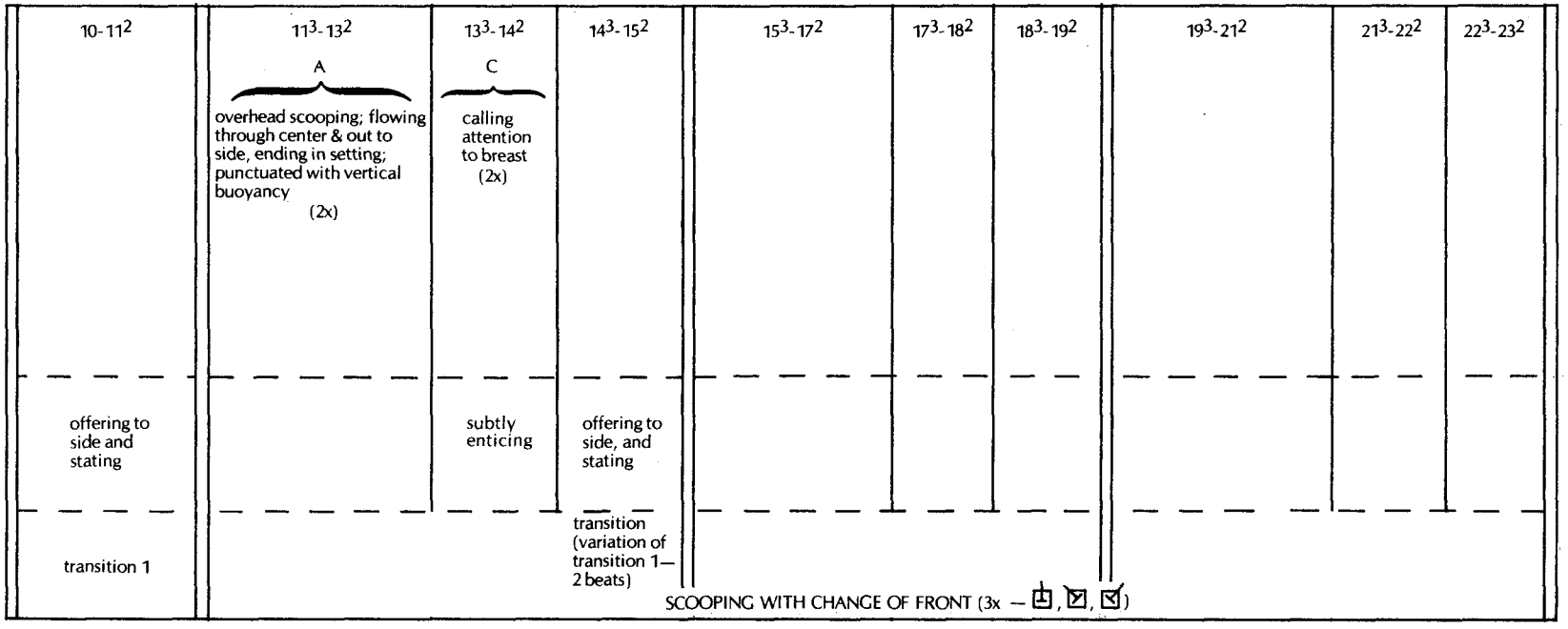
APPENDIX B

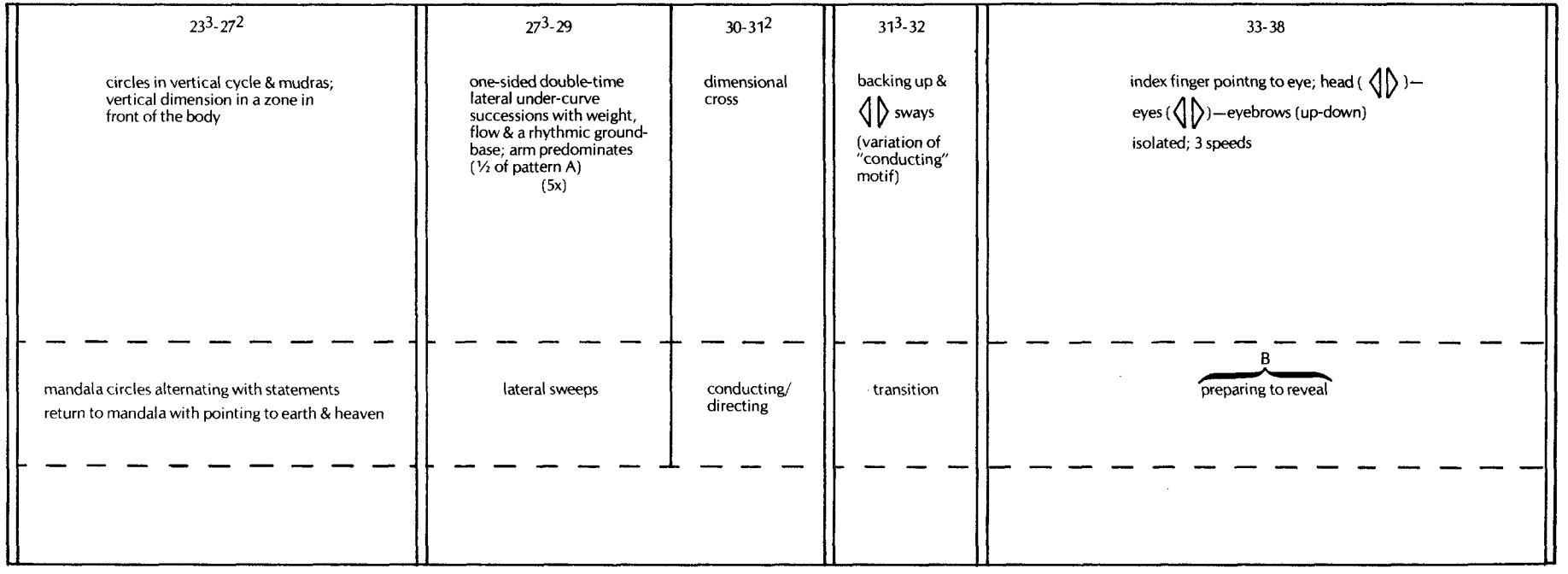
Choreographic Outline of Part I of Cholkeṭṭu

Notes to Reading the Choreographic Outline

1. Single vertical lines divide sub-sections and correspond to single horizontal lines in Appendix D.
2. Double vertical lines divide sections and correspond to double horizontal lines in Appendix D.
3. Numbers refer to measure numbers (superscripts to counts within a measure) and correspond to measure numbers in Appendix D. (First section is unnumbered both here and in Appendix D.)
4. The broken horizontal line separates three descriptions of the same movement (reading from top to bottom—subjective description of what is happening, the overall feel of a sub-section, the overall feel of a section).
5. Width of a space between vertical lines indicates approximate length of time to perform the movement.







39-46[3]	46[4]-48	49	50	51-54
kneel; ornamented vertical plane with wrist circling into firm mid-line statement; density changes (tempo, additional arm, circles)	forearm/palm rotations with small elbow pulls & accents; eyes	pattern B in kneel	rise, back up with spreading	free-flow arm spiral facing and then walking and turning (related to pattern A)
ornamented mandala	D table-top; human zone		transition	carving and flowing congenial relaxation

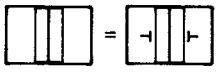
55-56[2]	56[3]	57-62[2]	62[3]-63	64	65	66-67[2]	67[3]-68[2]	68[3]-69[2]	69[3]-70[1]
forearm/palm rotations with soft succession in hand and repeat pattern C with stamping ground-base	variation of transition 1 (in 2 beats)	weight-flow; sequential upper-body sweeping, total 3-dimensionality, ending with 2 diagonal spoke-like openings, returning to mid-line	rhythmic stamps with slight forward progression	free-flow spreading (relating to upstage diag.) with change of front returning to forward to arrive at another stage space, punctuated by vertical buoyancy with lower arm rotation and mudra change	repeat of C ending with vertical buoyancy				
variation of motifs D & C	2 beat transition	waving wheat; marking time ending with 2 statements		hostess offering	subtly enticing				
SUMMARY TRANSITION			2x						

70^2-74	75 F	76 E	77	78-84^3
free-flow spreading into the up-stage corner & the upper zone going into spiraling into the mid-line (with change of front returning to forward), leading into sinking & spreading in the side-low zone via carving hands completing the vertical cycle (weight effort fluctuations) (4 + x)	twisting/carving hand into side dimension ending with wrist relaxation/ hand drop with tilted torso and strong rhythmic ground base (2x)	large vertical cycle arm spreading with arms and lower arm outward rotation initiation, returning to mid-line with lower arm inward rotation; upper torso tilting and sideward focus, finishing upright (2x)	pattern C (4x)	
variations of hostess offering — more generous	carrying something to side & dropping it	sweeping	subtly enticing	
	MANDALA TRANSITION			SUMMARY TRANSITION

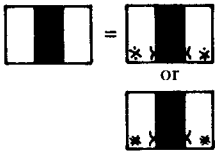
84^4-85^2	85^3-86^2	86^3-87^2	87^3-88^2	88^3-92^2
vertical cycle arm spreading from middle zone to high zone with torso tilt; reverse & return to mid-line, upright torso (kinesphere pulls) (variation of E)	crisp forward statement going into fluid rotary carving arm gesture with focus in a tipped horizontal plane with torso accommodation concluding in a crisp forward statement	strong mid-line centering with sinking, spoking into the diagonals & relaxed spatial counter-tension in the lateral dimension, eyes following	twisting/ carving hand into side dimension with upright torso, ending in vertical and lateral dimension with relaxed wrists/hands (variation of F)	direct lower arm rotations in sagittal dimension with vertical dimension punctuation, while travelling in room dimensional cross (2x)
single mandala	carving sweeps into stating	spoking	carrying something to side & dropping it	sagittal penetrating

APPENDIX C
Notation Glossary

Abbreviations

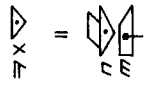


The feet must always be far enough apart to avoid entangling the ankle bells—regardless of level and rotation of legs. However, no effort should be made to place the feet a particular distance apart—the dancer should focus on keeping the feet together, and then consider the bells. Note: the dancer performs in bare feet.



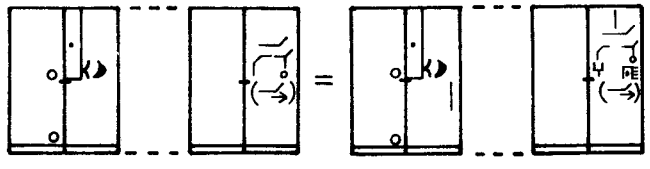
Low level supports, whether on one or two feet, are in 3 or 4 degrees of flexion and on the full foot unless otherwise stated.

The same applies to the left arm.



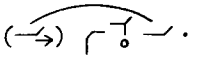
The same applies to the left arm.

Care should be taken to read this as a normal stretched side middle gesture, with the wrist directly to the side of and at the same level as the shoulder. It is not influenced by the above abbreviation.



The same applies to low level.
(Effort indications should be read vertically in the same manner as the Labanotation.)

In order to produce the correct "slapping" type of sound with the whole foot as it contacts the floor the heel "plants" itself in a stable way ( ) and the padded sole of the foot allows the weight of the foot to fall through it in a freely flowing relaxed way ( ). The whole foot is then easy ( ) on the ground once the sound has been created. The mobile state upbeat ( ) leading into this action contributes to the rhythmic dynamism of the whole effort phrase:



The importance of lifting the foot in preparation for the stamp lies in its contribution to the effort phrasing rather than its delineation as a specific gesture. Hence, this unemphasized preparatory leg gesture is either not notated or notated only as a free action stroke.

= heavy, passive weight giving in to gravity.

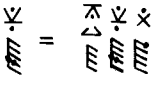
= weighty, sensing weight but not totally passive.

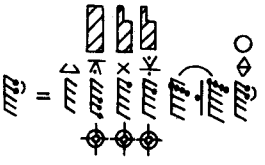
= accelerating.

The inclusion bow is used to represent the retention of a leading part, formerly stated as a bow with a body hold. (This is based on a usage adopted by ICKL in 1979.)

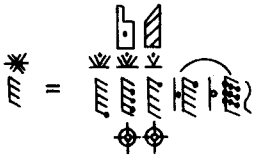
Hand Positions

All configurations of the fingers remain in effect until a new configuration is stated (an assumed body hold). Because of the complexity of the hand positions direction and level indications for the hand as a whole are separated from the indications of the hand position itself. All hand positions may be performed with either hand: the abbreviation used is stated only for the right hand.

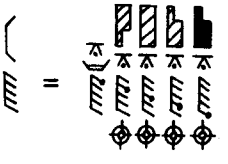




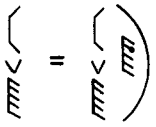
The tip of the index finger should touch the side surface of the thumb precisely at the point half way between the tip of the thumb and the base of the thumb nail. Together these two fingers should form a smooth circular shape. This shape is stated in the information contained within brackets— ◇ indicates a shape created by a body part, and ○ states the shape. (This is based on material recently approved by ICKL relating to design writing.)



Depending on the length of the performer's fingers, the palm surface of the thumb approximately touches the back-of-the-hand surface of the middle segment of the middle three fingers.



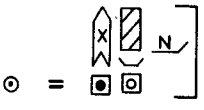
The emphasis is on a sagittal (within the hand) spreading of the fingers, with the exception of the thumb, which is laterally spread, while each is folded over its back surface as much as possible. The spreading is emphasized rather than each finger arriving at a destination, with the middle finger maintaining its alignment with the longitudinal axis of the hand. The symbol (is proposed here to represent sagittal spreading. (This is based on ⌣ used for lateral spreading.)



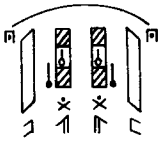
The sequential action is one in which the opening out of the fingers to the sagittally spread position progresses from one finger to the next, starting with the index finger. (This does not refer to a sequential wave within one or all fingers.)

Clarifications

The chest has a very clear "upness" and "openness" above the pelvis which is slightly somersaulted forward. This body attitude is maintained throughout with a sense of ease (N) except when the support(s) is in low level, at which time the back of the waist becomes more bound:  .



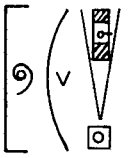
The pelvic somersault and binding of the back of the waist accommodate full outward rotation of the legs and depth in the low level plié, and serve as a cushion to the body for the impact created by the stamp. The counter tension created by the deep plié in relationship to the place high chest results in an overall vertical dimension spatial emphasis:  .



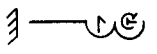
When the arms are in this position the precise degree of deviation forward from  should be determined as follows: with the face looking  , the dancer should be able to look up, with eyes only, and see the hands.

Although it is not necessary to write all three levels in the transition to place high (based on the rules governing paths of gestures), they have been written here to emphasize the desired flat, widening feel (spreading in the vertical plane).

The wrist *joint* is relaxed (not the lower arm); i.e., it is allowed to fold over its front surface, but this is achieved through relaxation rather than consciously folding to a specific degree. The lower arm rotates inward so the fingertips go towards place low, but it is the wrist relaxation that takes precedence over actually arriving place low. The hand is also relaxed, rather than held in a specific hand position.



This is a complex movement that should be looked at in the context of the arm movement and center of gravity shift it accompanies. It is a relaxed chest succession over the right side toward a 1/3 direction from place high. Precise performance may vary but care should be taken to *allow* the chest to move to accommodate the weight shift in a relaxed manner, without over-emphasizing the succession. This is the antithesis of the held-torso used in ballet.



The double-cupped addressing bow is used to indicate that a body part addresses two other body parts. In this case the hand addresses both the right shoulder and the right ear.

The ad lib sign relates to the length of the surface of the fingers that makes contact. The surfaces most usually involved are those lying between the tips of the fingers and the second joint.

Pins stating minor movements away from major positions are based on distal center.

A movement that gives a sense of the vertical plane.

A movement that emphasizes the diagonal pull between forward-right-down and back-up-left (with leftness stressed).

Timing

MM = 134

The first four measures (unnumbered and of unequal lengths) constitute an introductory section not considered part of the dance itself. The section is rhythmically free (both music and movement), and requires approximately 39 seconds to perform. Specific timing of movements within the 39 seconds may vary, the only requisite being that the dancer must arrive at the starting position for the dance just prior to the rhythmically structured portion of the music, and should do so in a fashion that is neither too hurried nor too prolonged. The timing notated documents the approximate timing of the informant's videotaped performance.

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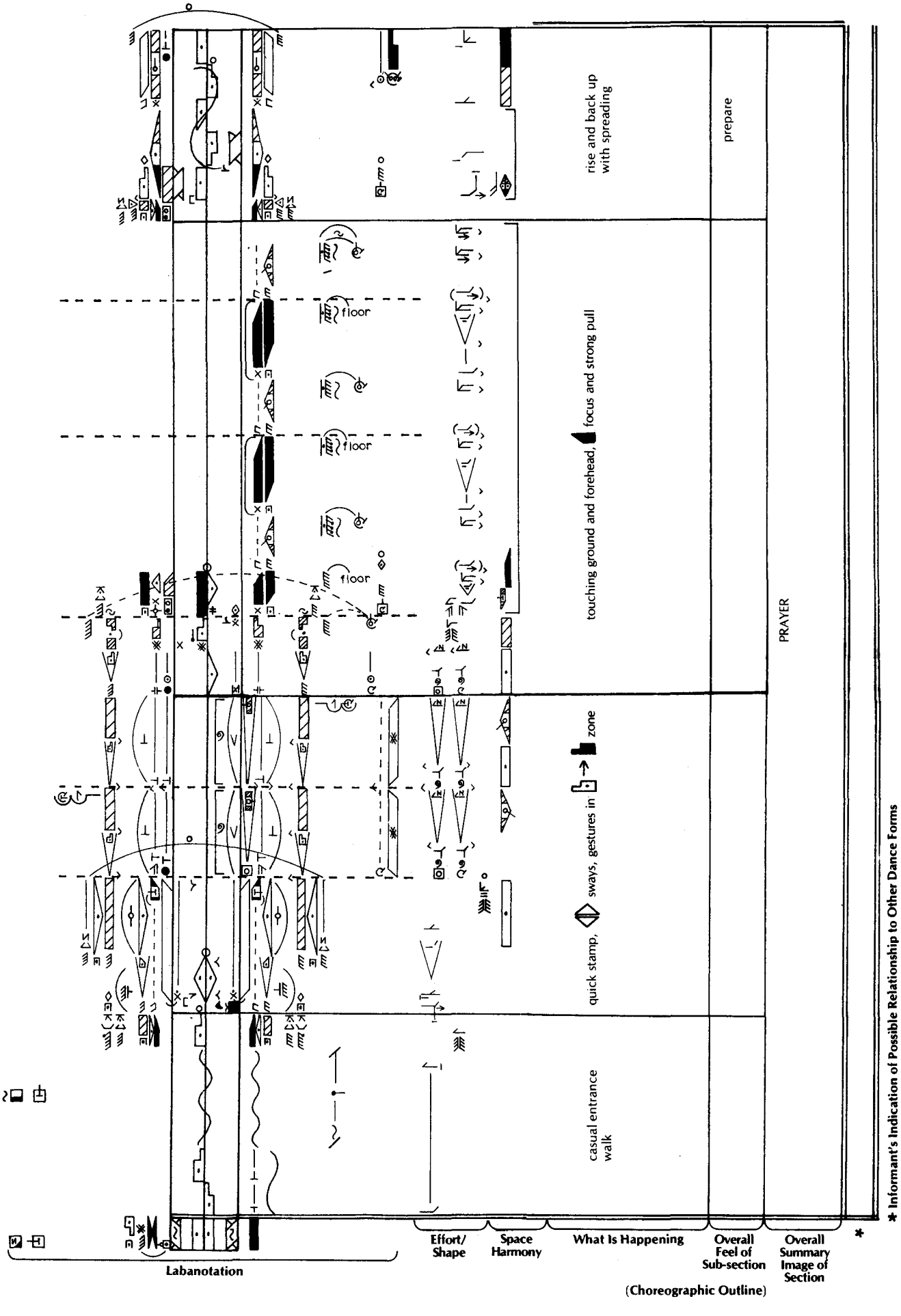

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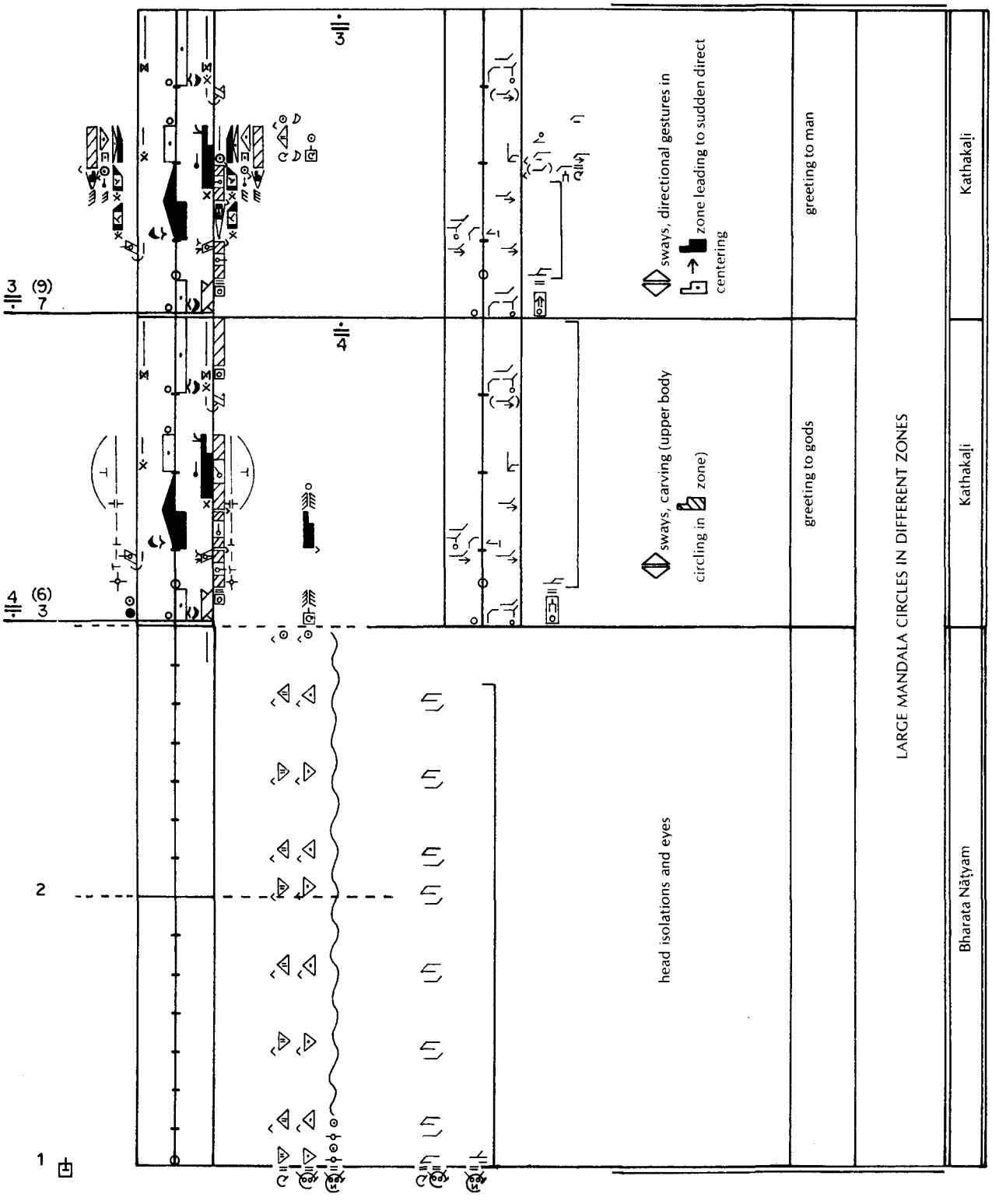

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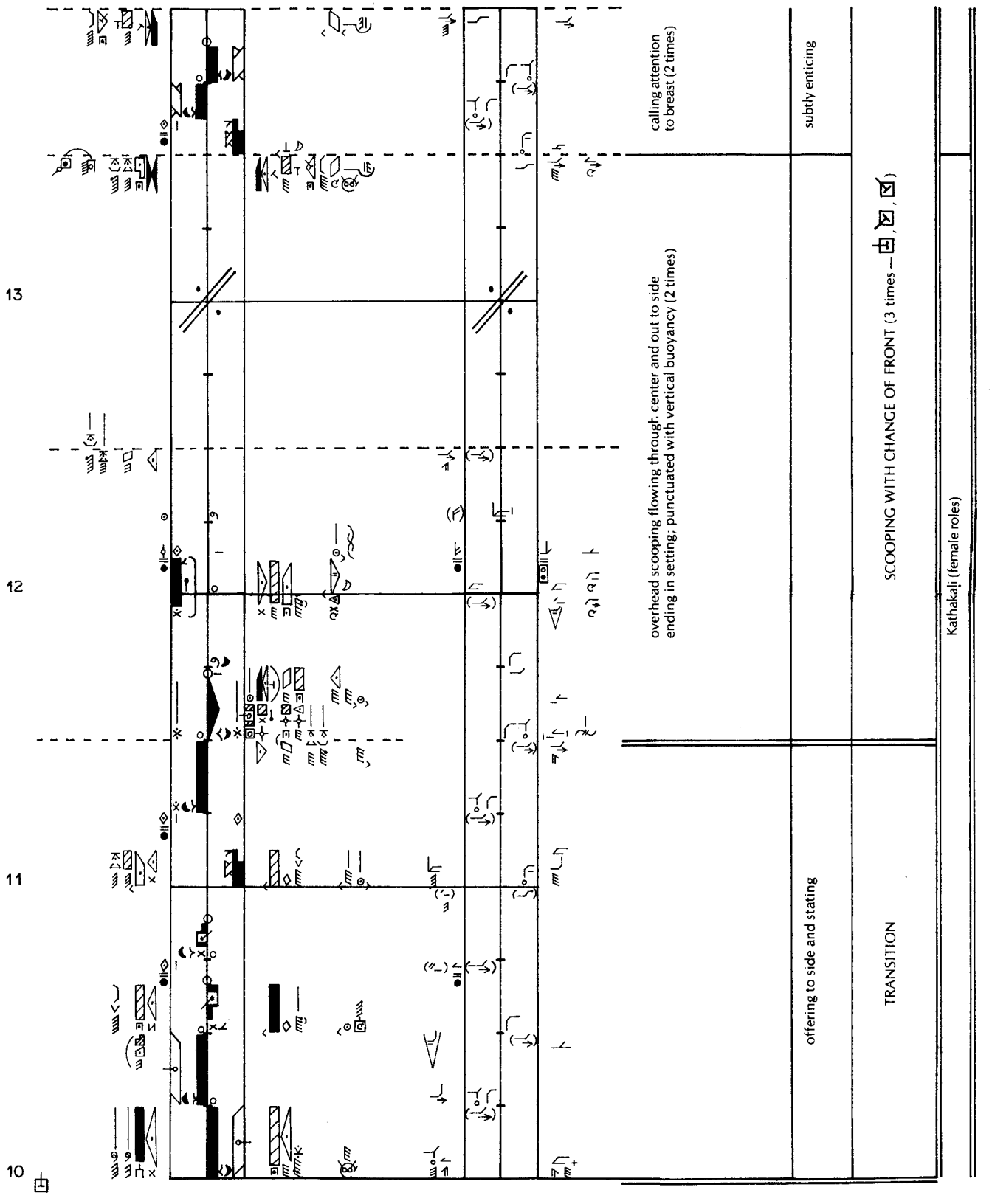

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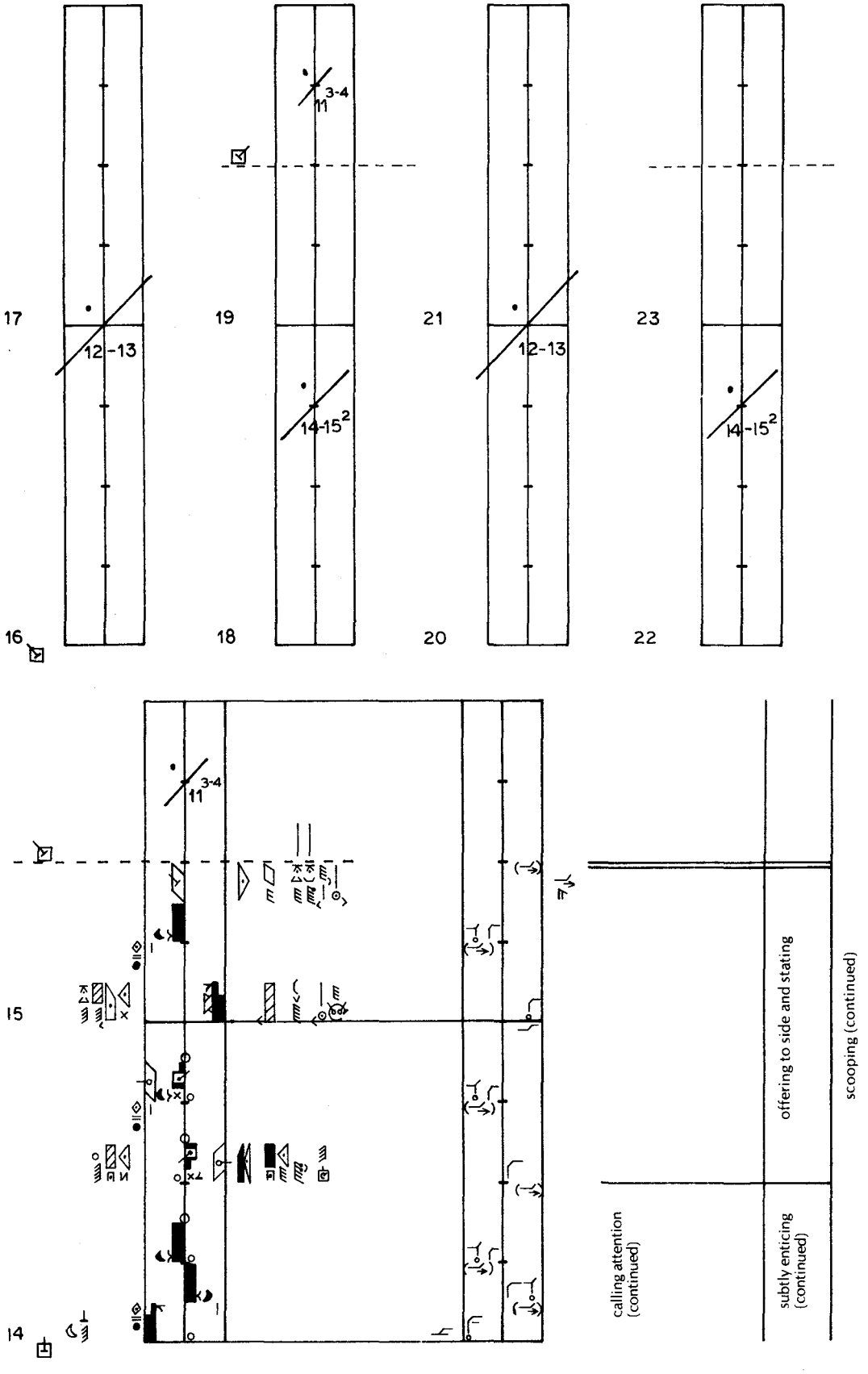

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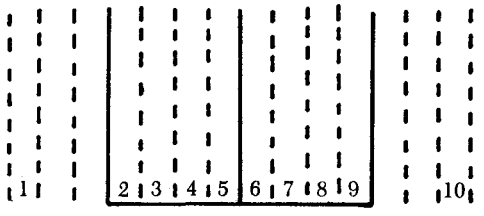
APPENDIX E

Glossary to Integrated Scores

STAFF

The staff has four columns on each side of the center line; the arm gesture column is the third column outside the staff (rather than the second):



1—gestures of the left arm
2—gestures of the left leg or Effort/Shape information related to or concerning left supports
3 and 4—modifiers of left leg gestures and left supports
5—left supports
6—right supports
7 and 8—modifiers of right leg gestures and right supports
9—gestures of the right leg or Effort/Shape information related to or concerning right supports
10—gestures of right arm

All other columns require pre-signs.

Within the staff, E/S symbols are placed alongside the symbols they modify (e.g., Integrated Score 1, count 1—right support).

Outside the staff, E/S symbols are:

—used as pre-signs in individual columns (e.g., Integrated Score 2, ⊡ in measure 24^{3-4});

—placed within a single bracket to modify all segments of the arm (from shoulder to fingertips) on the side of the staff where the bracket is placed (e.g., Integrated Score 2, measure 23^{3-4}).

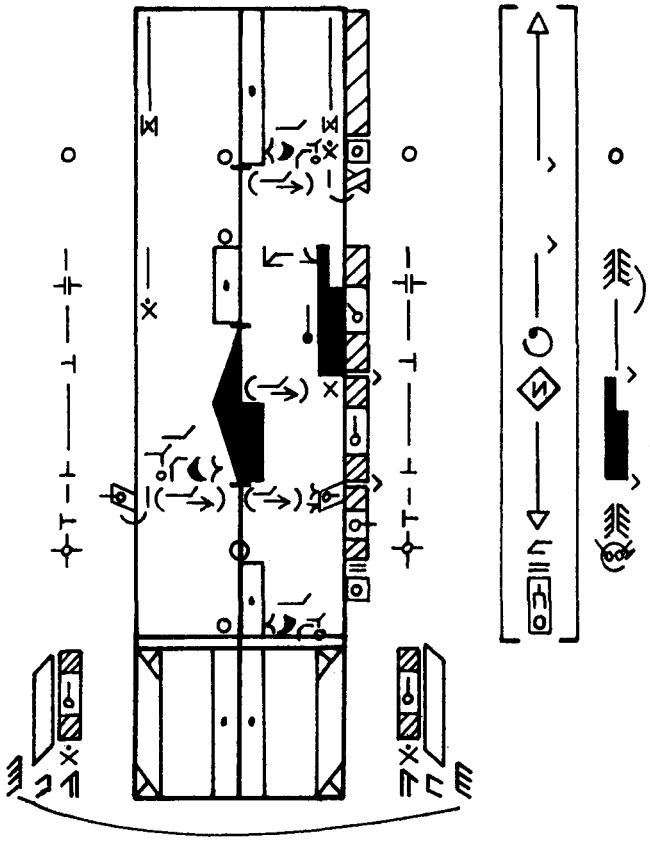
Parentheses surrounding Effort/Shape symbols show an up-beat preparation for a major action or effort (e.g., Integrated Score 1, left leg gesture at end of count 1). The structural nature of this preparation is not notated when it is not important (e.g., Integrated Score 2, right unstated leg gesture at the end of 24^{4}).

DESIGN DRAWING

Design Drawing that clarifies or adds to information provided by the major part of the score is placed within a double bracket—one to the right and one to the left of the design notation. Effort/Shape symbols may also be used as pre-signs in Design Drawing.

APPENDIX F

Integrated Score 1



Cholkettu, measure 3

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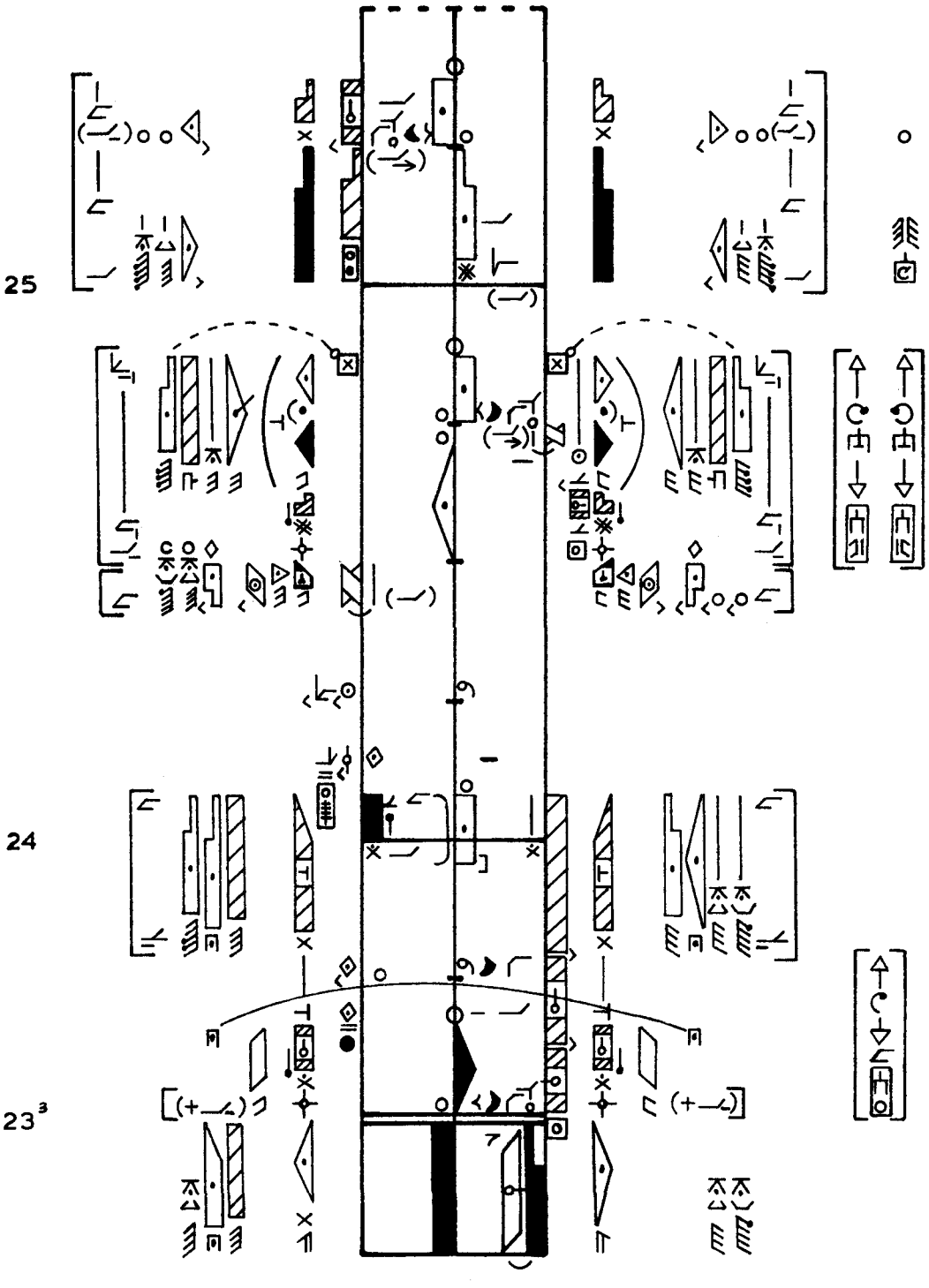
Integrated Score 2



Cholkeṭṭu, measures 23^3-25^2

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APPENDIX G

Core Characteristics of Cholkeṭṭu Segment Analyzed

BODY

Body attitude

—grounded connection to the floor in vertical dimension maintained throughout (upper torso tilts are brief and constantly return to vertical)
—stable lower body
—varied relationships of center of weight to gravity
  —spatially held (in direction and level)
  —buoyant
—emphasis on body midline (outward excursions always return to midline)

Body parts

—parts used (great involvement of many body parts; clear distinctions between parts involved; changing relationships between parts; variation in size of segments used)
  —legs (upper, lower, feet)
  —upper torso (chest)
  —arms (upper, lower, hands, fingers)
  —neck/head
  —face (eyes, eyebrows)
—predominant nature of use
  —emphasis on extremities (hands in mudras, feet in stamping, neck/head, eyes)
  —use of stamps as a rhythmic ground base
  —body parts frequently touch or move in a clear spatial and effort relationship to each other (frequent light-bound-direct contacts)
  —highly segmented use of body parts, particularly hand/fingers
  —arms curvilinear rather than angular
  —upper body explores space while lower body reiterates rhythmic grounding

SPACE

Use of territory

—frontal orientation
—limited locomotion
—no elevation (at least one foot always maintains contact with ground)
—eyes generally follow hands, rarely look directly at audience

Use of personal space

—upper body used to explore space (much tilting to side and front, but none to back)
—emphasis on midline, with constant excursions out and back again
  —spatial tension/distance created between body parts and center and body parts and each other
  —peripheral spatial tension created by central gestures spoking out and then becoming peripheral
  —supports and leg gestures occur almost entirely within the dimensional cross, with a continual return to a closed position
—emphasis on arm movements creating a mandala shape in a variety of ways
  —full or partial circles in the vertical plane
  —circular shapes in the horizontal plane
  —carving circular shapes overhead
—Use of spatial transition—emphasis on flowing planal work in vertical (lateral) or sagittal cycle; spatial intent always in relation to dancer's center

EFFORT AND SHAPE

Predominant use of effort

—clear crystallizations, never vague, every body part "knows what it should say"

Predominant effort combinations

—mobile to stable ( ) on a small unit level within each stamp and on a large body level between upper sweeping and lower groundedness or between mobile fluttering eyebrows and stable half smile; also between sections of dance
—flow effort emphasized throughout—constant flow fluctuations on a subtle level and extremes of free and bound both between body parts and sections of the dance
—light, bound, direct contacts (toe touching floor, hands touching each other) that seem to suggest enticing—an effort constellation Laban felt created a "timeless" or "spell drive"
—dream vs. alert/awake ( ) between torso and head/eyes and between sections of dance
—use of remote upper vs. rhythmic nearness in lower (); also between sections of dance

Organization of effort in sequence

—phrases with frequently held accents
—effort punctuation at end of phrases

Shape change

—much carving/scooping punctuated by piercing, cutting accents
—shape flow support in a relaxed upright torso, but shape flow is not major expressive mode
—shape change usually environment oriented —either directional goal orientation or carving and making volume in space visible

Progression of movement through body (complex relationships between body parts—e.g., move one body part, then hold and move another in relation to it)

—constant interplay with continuous changes between systems
—feet may move by themselves or with arms, but arms rarely move by themselves
—successive "passing" of movement from one body part to another
—repetition of movement patterns in a variety of ways

TIME

Fluctuations in movement density

—alternations between a sense of rushing and calming
—repetition of movement patterns at a speed twice as fast as the original version
—clear relationship of movement to basic musical pulse
  —movement and music units do not always coincide, but periodically do
  —movement phrases often begin on the third beat of a musical measure