AN ANALYSIS OF THREE NON-OBJECTIVE CHOREOGRAPHIC TECHNIQUES

by

Mary Carolyn Byrum

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro
1976

Approved by

Virginia Moomaw
Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

Dissertation Adviser Virginia Moomaw

Committee Members

3-18-76
Date of Acceptance by Committee

BYRUM, MARY CAROLYN. An Analysis of Three Non-objective Choreographic Techniques. (1976)
Directed by: Miss Virginia G. Moomaw. Pp. 184

The purpose of this study was to prepare a written script suitable for use in choreography classes on the college level. The script identified, analyzed, and clarified the current non-objective choreographic approaches of three contemporary dance artists. The three selected non-objective choreographic approaches were multimedia by Alwin Nikolais, chance/indeterminacy by Merce Cunningham, and computer by Jeanne Beaman. The script was organized to provide a flexible supplement and guide for viewing the selected films pertaining to the non-objective choreographic approaches of these choreographers. The three available 16 millimeter films selected for analysis in the scripts were FUSION by Alwin Nikolais, RAINFOREST by Merce Cunningham, and STATIONARY DANCE by Jeanne Beaman.

In order to make each script practical in content and organization, the materials were structured into two parts. Part One consisted of supplementary preparation materials for the instructor. This included suggested guidelines for use of the scripts, the choreographer's general choreographic techniques for composing a dance, and the choreographer's key choreographic characteristics. Part Two consisted of the video-audio analysis to accompany the showing of the film. This included a brief introduction to the nature and background of the choreographer, a general analysis of the film, the specific analysis of the first part of the film, and a general checklist of characteristics and discussion questions to use with the film. The audio portion of the script consisted of the commentary to be spoken as the film is being shown. The video portion of the script included

how and when to operate the film, illustrations of "still"frames related to the audio-commentary portion of the script at given points, and the approximate length of time in minutes and seconds which the film must be run to identify the material covered in the script's commentary analysis.

Professionally made films can be used to help bridge the choreographic gap between dance educators and professional choreographers. The available 16 millimeter films accompanied by scripts can definitely contribute to the learning of specific knowledge and skills associated with the current non-objective choreographic techniques. They are valuable teaching aids in dance primarily because they illustrate in physical action the actual characteristics that are associated with the choreographer. Both the films and accompanying scripts can compel attention, magnify important characteristics of the dance, and offer a satisfying aesthetic experience.

ACKNOWLEDGEMENTS

The writer wishes to express her deep gratitude to her dissertation sponsor, Virginia Moomaw, and to Dr. Lois Andreasen, Dr. Gail Hennis, Dr. Robert B. Rosthal, and Dr. Herman D. Middleton, members of the sponsoring committee.

Special thanks are extended to the following individuals for their encouragement and contributions: Jeanne Beaman, Betty Bowman, Carolyn Brown, Robert Carswell, Jeanne Eller, Bettye Giles, Harry Hall, Elizabeth Hammer, Dale W. Isner, Michael Noll, and D. A. Pennebaker.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The modern dance came into existence more than fifty years ago because its pioneers demanded freedom of expression, temperament, and aesthetic values. These pioneers initiated the modern dance movement which brought about the development of more individual techniques, a search for new forms, new content, and dance movements that enabled their work to speak of the new vital spirit of their time. The modern dance, unlike the ballet which has one codified technique, comprises several techniques. By its very nature, modern dance is constantly renewing itself through the widely divergent points of view and approaches of artists, teachers, and students. Therefore, it is not a system, method, or technique; it is a current point of view. The modern dance depends entirely upon the use of a non-codified movement vocabulary; it has proven itself to be more than a passing phase or fad of self-expression.

The modern dance has established itself as an independent art form primarily because the pioneers who survived pursued their individual convictions and visions rather than hand-me-down stereotypes. Katharine Kuh states that ". . . Validity is sometimes impaired because, though art can grow from art, it grows best from personal discovery." (10:226) The modern dance has also developed new ways of choreographing. More recent examples include multi-media, chance/indeterminacy,

and computer choreography. From the personal discoveries of many dedicated artists, the modern dance has matured into an eloquent and independent art form.

In the past decade, the dance has undergone a radical transformation; i.e., the 60's were an unforeseen explosion of the avant-garde dance. We can attempt to understand the present trends and concepts of the current dance by understanding the past. The historical evolution of the dance evolves around three types of individuals:

1. Inventors. Men [or women] who have found a new process or whose extant work gives us the first known example of a process.

2. The Masters. Men [or women] who combine a number of such processes, and who use them as well or better than the inventors.

3. The Diluters. Men [or women] who came after the first two kinds of writer [choreographer], and who couldn't do the job as well. (26:29)

When Isadora Duncan rebelled against the classical ballet, she initiated the creation of a new dance form, modern dance. Other strong, innovative personalities of the modern dance included Wigman, Graham, Humphrey and Weidman, and Holm. They comprised the nucleus of the modern dance development from the 1920's until the early 1960's. Their choreographic approach included emotional expressiveness and linear development.

The history of art points to the fact that when traditional art objects of a society become sterile and ineffective, new ones are found by destroying or altering the old ones. In the late 1950's and the early 1960's an historical eruption occurred in the modern dance. In essence, it was a choreographic revolution; a deliberate break from

literal, dramatic, emotional expressiveness to that of the nonliteral dance.

Kuh believes that the contemporary arts have been shaped by and are responsive to the accelerated tempo of our time, to the power of speed, to a new bewildering awareness of space, and to the advances of science. (10) The art produced currently in all media seems to tend toward the abstract. Such abstract metaphors place a heavy responsibility upon the viewer; his participation and involvement become an integral part of the finished work. Diversity exists in all the arts. Perhaps the only characteristic that many contemporary works have in common is that they are products of the same era. George Kubler believes that

> The repeated decay of theories of art into mutually antagonistic positive and negative extensions, into formal and anti-formal derivatives, has convincingly demonstrated the impossibility of defining art restrictively, except for very short intervals of time. (40:18)

Many of the professional modern dance choreographers have willingly accepted the challenge of keeping pace with the current innovations which are occurring in the other art forms. The past decade has shown that rapid transformations have occurred in the professional dance studio. It is doubtful that such transformations are occurring in the dance on the campus scene. Some writers believe that in our institutions of higher learning, too much emphasis has been given to knowledge for its own sake. The students learn about the arts, but provisions for practice are minimal. Thus, it is not enough to make the student knowledgeable. He should be motivated and guided in the development of sensual perception and expression.

Some educators believe that one of the primary purposes of art is that of educating the senses. Irwin Edman argues that art ". . . does not teach by argument or demonstration, by presentation and disclosure; it does not explain, but shows; it does not prove, but points out . . . ." (16:33) Therefore, the student should be given encouragement and guidance in making meaningful choices for himself. Responsible self-expression within the student's discipline can be experienced when the student is afforded the opportunity to experience and to make both the thinking and the doing a vital part of the learning experience.

One of the problems of art education is that of making the art relevant to the concerns of the students. Awareness of the nature of the creative problems cannot be fully experienced by the student until he is given the help, encouragement, and freedom to investigate current movements in the arts. Each group of students is different. They should be motivated in terms of where they are in art experiences and where they wish to go.

One of the challenging problems faced by the dance educator today is that of keeping abreast of the current dance scene. For the dance teacher located in remote areas, the problem is doubly complex and frustrating. It is not always possible for the teacher to attend professional dance schools, or to transport eager dance students long distances to experience a live performance of current dance. The problem is being greatly alleviated by the dance teacher's access to current dance films or video tapes. There is need for many more current dance films and video tapes.

Dance, as an artistic form of communication, is the vehicle for the expression of the human condition through motion of the human body. The beginning dance student should be recognized as a potential artist whose individual creativity and vision must be guided, developed, and nurtured in the total realm of choreography. Studying the disciplines of the choreographic processes of the past and current contemporary dance artists should be a vital objective and responsibility of the dance educator. Only then will growth be cultivated to enable the student to experience, to choose, and to alter the concepts to his personal vision.

The Regional American College Dance Festival, held in March, 1973, offered an interesting perspective of the college dance landscape. Adjudicated works were restricted to those choreographed by faculty. Some faculty restaged classic-modern dance choreographies. The nonadjudicated programs contained original student choreography. Clearly, these presentations were indicative of what can be learned through individual creative endeavors. It is doubtful that the new ideas offered in various areas could have been realized by reconstructing their professor's repertory or personal styles. Given the fact that students are eager to discover what is happening in the dance world today, the suggestions for future dance festivals are significant: choreographic workshops, student adjudicators, more emphasis on video tape and film, multi-media experiments, and abstract dance. (20)

According to some writers, restrictive attitudes have dominated the college scene for years. Students have been urged to conform to

the narrow, limited line of stereotyped styles. Clearly, dance educators should be cognizant of the fact that the standards of college dance cannot be raised until (1) the student's individual creative potential is acknowledged; and, (2) provisions are made for giving the student the opportunity to experience and participate in the directions of current dance trends. Obviously, students are receptive to new forms and ideas. If the contemporary college dance is to be viable, it must allow for ". . . the freedom, vitality, and freshness of the college life today--the new, beautiful, and strange." (20:63)

Discipline, technique, and tradition should be regarded with respect; but, not as ends in themselves. A prerequisite for freedom in art is aesthetic discipline. This can be achieved by (1) acquiring the craft of choreography; (2) understanding what choreographers of the past have done and what the current choreographers are attempting to do by identifying, clarifying, and classifying the characteristics peculiar to their art techniques; and (3) creating and performing works which embody the key characteristics of the innovative artist's choreography.

The essential current choreographic characteristics should be described operationally and ordered in an open-ended manner so as to provide the student a choice of selection. At the same time, while the student is gaining facility with the craft, a more expedient and comprehensive grasp of the content and form could be achieved by visually perceiving examples of the choreographic approaches through the use of 16 millimeter films.

PURPOSE OF THE STUDY

The purpose of this study was to prepare a written script suitable for use in choreography classes on the college level. The script identified, analyzed, and clarified three current choreographic approaches of three non-objective contemporary dance artists. The three selected choreographic approaches were chance/indeterminacy by Merce Cunningham, multimedia by Alwin Nikolais, and computer by Jeanne Beaman. The script was organized to provide a flexible supplement and guide for viewing the selected films which pertained to the non-objective choreographic approaches of each choreographer.

NEED FOR THE SCRIPT

Various dance educators, critics, and professional choreographers believe that a cultural lag exists between the professional choreographic innovations and the choreographic experiences offered in various colleges. (18, 48, 77, 81) Some of the reasons given for the cultural lag include geographical isolation from the dance centers which may account for minimal training and infrequent exposure to current dance trends. Another reason is the scarcity of qualified people to inform educators about the changing dance scene. And the strict financial limitations of the college/university budgets severely hamper performances by professional companies on the campus. (18)

The use of good dance films, accompanied by written scripts, may be one way of bridging the choreographic gap between dance educators and the professional choreographers. It seems that a written teacher's

script would be welcomed, if the printed word were supplemented by films. Given the idea that written scripts might present added insight into the current choreographic concepts, it is highly unlikely that a sufficient working knowledge could be attained solely by this means. An examination of such literary works resulted in the general conclusion that they are not sufficient in themselves to give the needed clarification of the techniques, except in fragmentary ways.

Since dance is a visible art form, visual ideas may be constituted primarily in a language system of its own. Before a more comprehensive understanding can take place, both the teacher and the student must be exposed to a variety of visual comparisons of both nonverbal and verbal choreographic approaches.

The written and verbal communications about the current nonobjective choreographic techniques are seldom in direct and equivalent descriptions. That is, they are in themselves descriptive only as the function of the language itself. Therefore, both dance educators and students alike are confronted with the task of making sense out of the terminology, obscure allusions, aphorisims, and various pronouncements of the current dance scene. Clarification of meaningful, non-trivial explications of the characteristics of the artist's innovative aesthetic is thus another aim of this dissertation.

Dance educators cannot pedagogically avoid acknowledgement of the current choreographic approaches. The current approaches may be the vital forces which shape the dance of the future. An abundance of written material about dance does exist. However, the current choreographic approaches are almost entirely omitted. Current choreographic

works recorded on 16 millimeter film are virtually non-existent; e.g., the available works to date include Merce Cunningham's RAINFOREST, excerpts from ANTIC and STORY; and Alwin Nikolais' INVENTIONS, FUSION, and TOTEM. The most current film is Murray Louis's MOTION. However, it currently rents for fifty dollars per showing and sells for five hundred dollars per individual purchase. To many this is a formidable expense. Clearly, the need for exposure to current choreographic approaches through both viewing and analysis of the artist's personal style, choreographic structure, and exploratory techniques is critical.

Audio-visual equipment is being made more available in many educational institutions. Every effort should be made to use this medium as an educational tool for dance education. Dance is a visual art form; and, its visual components constitute and operate as a contained and complete language system of motion. Although verbal attention to dance may not be directly transposable to or from its visual illusions, accompanying scripts could provide the needed constructs for a pedagogical synthesis in both physical education and interdisciplinary studies.

Therefore films of the current choreographic innovations accompanied by scripts could help close the cultural choreographic gap which seems to exist between dance in colleges and universities and professional choreographers.

LIMITATIONS OF THE STUDY

A workable synthesis of the key elements necessary for identifying, analyzing, and clarifying the current non-objective

choreographic approaches for the development of a script could not have been accomplished without setting specific limitations. The limitations of the study were the following:

1. Three different approaches to choreography were selected for the study. These were chance/indeterminacy by Merce Cunningham, multi-media by Alwin Nikolais, and computer by Jeanne Beaman.

2. Three selected 16 millimeter films were used as examples. They were the best available for the purpose: RAINFOREST by Merce Cunningham, FUSION by Alwin Nikolais, and STATIONARY DANCE by Jeanne Beaman. Selected available films by Cunningham, Nikolais, and Beaman were researched and listed in the appendix as a supplementary resource.

3. Approximately the first fifty seconds of each of the three selected films (RAINFOREST, by Cunningham, FUSION, by Nikolais, and STATIONARY DANCE, by Beaman) were analyzed. Guidelines for viewing each film in its entirety were given.

4. Each dance was analyzed in the following manner:

   a. A general overall structure was established.

   b. The smallest unit of structure (a phrase) and the treatment given to the phrase was determined.

   c. The specific verbal vocabulary characteristic of each choreographer was established.

   d. The script, suitable for use in choreography classes on the college level, consisted of a flexible methodological approach of the presentation and utilization of the material.

CHAPTER II

PROCEDURE

Within a relatively short history, the modern dance has grown enormously in prestige, quality, and variety. Perhaps it would not be an overstatement to say that the current dance, with all its diversity and eclecticism, is choreographically the most advanced in the world. (33) It was established in Chapter I that the sweeping transformations have been set in "motion" by the professional dancer-choreographer.

The script which will accompany the three filmed current non-objective choreographic approaches, made accessible to the dance educator, could help communicate more current dance to more people. Thus, it is possible that the dance consciousness could be advanced. However, given the fact that very few, if any, current scripts are available for this purpose, the writer was prompted to compose a three-part script for the three selected non-objective choreographic techniques; i.e., Alwin Nikolais' multi-media, Merce Cunningham's chance/indeterminacy, and Jeanne Beaman's computer.

CRITERIA FOR SELECTION OF FILMS AND CHOREOGRAPHIC TECHNIQUES

The selection of three non-objective choreographic techniques and the 16 millimeter films of these specific approaches was based on the following rationale:

1. The non-objective choreographic techniques of Nikolais, Cunningham, and Beaman signaled a break with the story-line or psychological-drama development of the traditional modern dance. Emotional motivation was no longer the only valid element of content. The choreographic structure was altered. Time was no longer used to support the logical developments of realistic events. (62)

Movement was not created solely from emotional motivation; i.e., each choreographer became interested in movement for its own sake. Thus, the conception and treatment of dance materials resulted in a more abstract, pure, or non-representational dance form. (17)

2. For more than twenty years, the choreographic concepts of multi-media and chance/indeterminacy have stimulated a continuing non-objective development of choreography in America.

3. Although various related dance and non-dance approaches have evolved from the innovative developments and techniques of Nikolais and Cunningham, the aesthetic disciplines of both artists have helped to strengthen the modern dance as an art form. Nikolais has achieved a high degree of success because of his unique ability to effectively blend sound, color, props, and movement into an integrated artistic whole; i.e., each element is essential to the whole. Cunningham has achieved a high degree of success with his new focus on time and space. He discovered a new way of finding material for his dances and achieved a new way of structuring dances. Beaman's exploratory work with computer generated dance has laid the foundation for the emergence of another new approach to choreography. It is significant that the print-out can be adapted for any age and/or skill level, providing a wide

range of possibilities for the teacher-choreographer. The works of each choreographer are not unexpressive, unnecessarily ambiguous, or overly-intellectualized.

4. Each choreographer places a different importance on the performer than the interpretive role of the artist-performer or our pioneer-artists whose works demanded a unity of style and acceptance of the artist's personal style. To a degree this is true with Nikolais and Cunningham; however, their choreographic endeavors have been displayed by dancers who possess an individual vitality and directness.

DEVELOPMENT OF THE SCRIPT

The development of the three scripts was achieved by the following process:

1. All available resources of information pertaining to the non-objective choreographic techniques of Cunningham, Nikolais, and Beaman were researched.

2. Significant information which pertained to the choreographic techniques of chance/indeterminacy, multi-media, and computer dance was researched, previewed, and selected.

3. Available 16 millimeter films which pertained to the specific non-objective choreographic techniques of chance/indeterminacy, multi-media, and computer dance were researched, previewed, and selected.

4. Approximately the first fifty seconds of each of the three selected films (RAINFOREST, by Cunningham, FUSION, by Nikolais, and STATIONARY DANCE, by Beaman) were analyzed.

DEFINITION OF TERMS

Abstract. Concerned with movement for its own sake. A dance without any conscious emotional or literal connotations. A painting need not contain an object; dance movement does not have to have a purpose other than simply to be.

Aesthetics. A theory of art which may facilitate the appreciation and understanding of the artist's work.

Avant-Garde. The advanced group in any field; for example, in the visual, literary, or musical arts, whose works are characterized chiefly by unorthodox and experimental methods.

Chance. Random and accidental methods by which one may find, explore, or arrange the materials of a dance.

Choreography. The art and craft of making dances. Consists of two major components: form and content. The construction or arrangement of the elements of a dance so as to carry out the intent of the choreographer.

Coherence. Relating to the order and consistency of materials.

Content. Is what "comes across" to the audience, and it can be a story, sensation, or feeling. In essence, it is what the dance is about. Content determines the statement and motivation or force of a dance. Content also dictates the form of the dance, the selection of materials, and how they are used.

Dynamics. The degree of force with which movement is performed. Shapes, lines, tempi, and rhythm all possess and create dynamics.

Gestalt. A unified whole, whose specific configurations or patterns cannot be accomplished by the summation of its component parts.

Kinesthetic. A sensory experience of movement. In the joints, tendons, and muscles are organs that tell us what our bodies are doing and where the parts are. This sense is called kinesthesia. The ability to respond empathetically and muscularly with one's own body movement to the body movement of others is also possible.

Kinesthetic phrase. The natural phrasing of body movement.

Kinetic. Pertaining to motion potential. For example, motion as related to and affected by the dynamic interplay of forces.

Linear development. Used in this study in the sense of conveying a character or story line development. Also a dance term used in the sense of lines and shapes created by the dancer's body.

Literal. Is sometimes used instead of the term "dramatic;" that is, "dramatic" may mean story telling or mood dances. Such dances have emotional relationships between performers--much like a cast in a play.

Motif. The germinal or seed idea of a theme or composition. Sometimes used in a dramatic dance to depict one dancer from another. For example, a motif might be used to give the movements of Joan of Arc a certain identity, while her jailers would have other motifs revealing their roles.

Non-objective. Concerned with abstract or nonliteral choreography; that is, a choreographic work devoid of literal, or emotional connotations.

Open form. Analogous to indeterminacy; that is, the arrangement of the material of the choreography is not set down in a definitive form. Although it is completely choreographed, the sections, order, durations and combinations may differ in each performance. As a result, the materials do not change, but may exhibit different qualities from one viewing to the next.

Organic phrase. A phrase which evolves from the initial movement; each movement leads into or motivates the next.

Phrase. The dance material that makes up a group of movements that are unified by a kinetic flow that comes to a natural completion. The length of a dance phrase will vary from phrase to phrase or from dance to dance.

Pure movement. Movement which springs from the impulse to move without literal or emotional connotations.

Sequence. A series of phrases or sections of a dance; succession of phrases or sections following one after another.

Rhythm. Is the time structure of a movement, phrase, or phrases.

Simultaneity. A choreographic technique whereby each dancer is doing something different simultaneously; for example, dancers performing different material at the same time.

Structure. Is the skeleton of a dance and is determined by its content; the organization of elements which determines the frame of a dance. Structure comprises both spatial and temporal patterns of a dance. Under spatial comes the floor pattern design, the shapes of the dancer's body or group of bodies, their relationship to each other and to the performing area. Under temporal component is found rhythm,

tempo, and dynamics. The structure of a dance evolves from its content, and is dictated by the subject matter.

Structured improvisations. A given movement or phrase to be performed within a certain amount of time during designated sections of a dance. In some cases, the dancer determines when to perform the movement or movement phrases.

Style. The spirit or the distinctive quality imparted to the total form. The special way in which an artist picks out his subject, arranges, organizes, and manipulates his material. It is a means by which an effect is achieved.

Subject matter. What the dance is about. Often the motivation for selecting movement, time, dynamics, and space elements.

Technique. The method or process of execution; that is, the how or manner by which something is developed or performed.

Time structure. In some cases, exacting units of time within which a given dance is choreographed; for example, the specific number of parts and the time allotted for each. In other instances, it may refer to the meter signature.

Transition. A movement or movement sequence that forms a connective bridge between two sections or parts of a piece of choreography.

Unity. Oneness or completeness of each part, as well as the total of all parts. Also elements of a work which produces a single coherent effect. The parts of a dance are organized so that nothing can be added or taken away without damage to the whole.

CHAPTER III

ALWIN NIKOLAIS, MERCE CUNNINGHAM, AND JEANNE BEAMAN

Three choreographers were selected for this study because they each had a different approach to choreography, were non-objective artists in that they did not use emotional motivation for finding and organizing choreographic material, and because there were films of their work available for study and analysis.

ALWIN NIKOLAIS: MULTIMEDIA

Introduction

Total theatre is an attempt to create a new synthesis of art and modern technology. It offers a fusion of sound, shape, color, light, properties, and motion--each having its own time-space existence which adds substance to the total theatre event.

Such is the multimedia, abstract world of Alwin Nikolais. His prolific imagination has created one of the most unique total dance theatres of the twentieth century. Spending almost a lifetime developing and perfecting a total dynamic dance theatre, he was able to bring the viewer and the art form itself a step further along in the evolution of man's awareness of life and its meaning.

Nikolais' early dance training includes study with Truda Kaschmann, a Wigman-trained dancer, Doris Humphrey and Charles Weidman, Martha Graham, and Hanya Holm. His theory/philosophy of the dance

appears to have been inspired by the German dance: "Certainly both Wigman's and Holm's philosophies regarding total theatre and the ordering and attention given to space as a key element of dance rubbed off on Nikolais." (77:183)

Aesthetics

Nikolais states that it is impossible to verbalize about the content of art. He asserts that the nonverbal subject matter of art is magic and that it is difficult to consciously understand. Although man can grasp the magic through mysticism, his failure to verbalize about it does not rule out its existence: "The element of mysticism exists simply because we do not have a name for it and cannot explain it." (74:117) Considering himself to be a mystic, he asserts that 75 percent of what the artist does is inexplicable to his conscious mind. He states that:

> The greatest area of understanding between people, lies below the surface of the obvious symbols of communication. For example, if I shake hands with somebody, the literal symbol is nowhere near as meaningful to me as my sense of the person with whom I'm shaking hands. It's this sense of things that I think the abstractionist is trying to get at, the perception of that which rests behind the immediate concrete surface. (74:118)

Believing that art explains itself, he identifies three prerequisites in any area of art: (1) abstraction (finding the essence), (2) idealization (removing the non-confirming materials to bring to growth the perception the artist wishes to communicate), and (3) the artefaction (the illusion created by the artist). (74) Related to the three prerequisites of art are three phases of artistic energy present in all forms of art:

1. A phase of passivity in which a thing has had to remain within its own time and space because nothing has moved it elsewhere;

2. A phase of disturbance (the energy within the object, or outside of it has caused the object to be displaced from its passive state);

3. A phase of outcome (the result of the disturbance has brought about another phase of passivity, or it has accumulated another "boost or whack," which has brought on another state of disturbance). (74:79-80)

Number two can be seen in dance when two dancers create a feeling of space between them, going toward or away from each other. The time consumed by going toward or away from another dancer creates a tension that is called spatial dynamics. With certain movements, the closing or opening of space seems to vary in the amount of time used.

In essence, Nikolais asserts that all art is illusion. The main substance of dance is the illusion which is created as a state of mind in the viewer; i.e., "Dance is a state of mind between the spectator and the dancer." (74:114) Its value lies in its impact rather than in its definition. He has created illusions by the integration of dance and its related arts, visual, aural, technological, and kinetic elements; and by dissociating dance from its literal ideas and gestural connotations to arrive at an abstract metaphoric language.

The basis of dance is motion. Action is motion; motion is dance. He states that, "When motion is experienced, not just the act of moving, it may be called dance." (74:31) Motion is the end function. It is used as a metaphor, i.e., as a purely abstract substance of dance. Motion is sensed, not told. The Nikolais dancer does not tell stories; his art is motion; and his language consists of motional qualities,

i.e., "Textures of light, heavy, thick, thin, soft, hard, large, small, etc. ad infinitum." (55:8)

Clearly, the essential ingredient in Nikolais' choreography is motion; and not the mere gross act of movement. He offers a good explanation of why the sensation of motion is significant:

> In the course of exploration of motion, we will find, in addition to kinetics, motion is also seeing, feeling, hearing, balance, gravity, sound, light, color, shape, smell and other senses as well. Some of these senses are of almost equal importance. Altogether, they add support and semantic dimension without which dance as an art form would be meager indeed. (55:8)

Therefore, dance, a three-dimensional visual and temporal art form, commands human sensitivity to motion. Motion demands detail values of its pathways; it indicates the manner in which the action occurs. Although the perception of dance motion is largely due to the kinetic sensory organs located in the muscles and tendons and tissues, the dancer must develop acute sensory perceptions such as the sculptural form (shape) of his body in action, time and space. In essence, then, the sense of motion requires the coordination and cooperation of several sensations.

The sensory perceptions of the dancer must be developed to the extent that he can subdue one sensation while calling attention to another. For example, the dancer may strive to create an illusion of weightlessness or lightness by de-emphasizing the sensation of weight and gravity.

Between and attached to the artist and art are the materials for art: devices, techniques, methods, and forms. The materials do not constitute art; the artist's conception and treatment of the material

is the determining factor. Nikolais transcends the literal and arrives at an abstract metaphoric language. Again, it is motion that is the basis for his choreography:

> The dance artist, when he composes, can subdue his literal character and invite attention to the motion, the shapes, and to the time and space in which these occur. He has found means to make a direct language of motion, and to use his literal figure as a sensitive instrument to delicately enact the drama of motion. (56:30)

Other important elements of the total, dynamic dance theatre include lights, color, sound, appendages to the dancers, costumes, properties, and decor. Each plays a vital part in creating the total theatrical gestalt. Within the total, complex environment, he perceives sculpture as shape, music as sound, painting as color, dance as motion, and theatre as dynamics. (77)

Choreographic Techniques

Nikolais' approach to choreography is usually an open and instinctive one; the germinal idea for a new piece is reflected upon for some time before the actual work is begun. When he begins to develop a work, a certain pathway or itinerary of thought is initiated in which he expects certain results and visions to occur. There is a clean order and play to give the audience an experience that is beautiful, coherent, and open-ended. (15)

Precisional care is taken to choreograph the most minute details of each image. He carefully selects kinetic and sensory perceptions that will be communicated through motion. The final image is carefully worked and reworked until it bears the visual truth of the textures of

motion which inspired it. The objective is to achieve what he calls "motional legibility."

> For example, the arm can draw a circle in space in a multitude of ways, each one having its particular value. The periphery may be stressed so that the circular line of action is emphasized. The gravity point may be emphasized or the suspensional aspect of the upper end. The senses may lift to an experience of the line as a boundary to space, or time aspects may be highlighted. Sense of revolution around a center will give further variation. (55:8)

This is the primary way in which the gestalt is achieved; i.e., the unifying principle necessary for a beginning. A shape, time, motion, and space must be found; the ordering of a series of events related to the specific intent of the choreographer must come together as an unified whole. Nikolais explains that

> We are striving for the manifestation of the noumenon, [an idea or feeling] and if the form relates to the noumenon, no matter how wacky that form might be, as long as it refers and is the most astute and precise structure, then it is form--no matter how formless. (74:92)

Therefore, the gestalt is utilized as the form of a choreographic work; and, with the acquisition of form, the content is revealed. Hence, content and form are inseparable.

His ability to fuse light, color, shape, motion, sound, properties, and decor into a total, integrated whole is phenomenal. As early as 1957, in a review of Kaleidoscope, dance critic George Beiswanger observed that:

> . . . the entire work is composed to the hilt, within an inch of its life . . . . . in its completed state it is so highly finished, so wirestrung, that it demands the utmost in disciplined precision from the dancers and the mastering choreographer. Indeed, one almost wishes for a single loose movement, one line or shape or thrust out of place, the composing is that controlled. (23:6)

The preceding description is certainly characteristic of Nikolais' current works. The seamless whole is so precisionally created, that it is difficult to tell where one medium stops and another begins. The continuity stems from the organic necessity inherent in the first movement of a work. Regardless of whether it be a single section or a long dance with many parts, the initial opening motions become the structural foundation for the remainder of the dance.

A special continuity and total unity is achieved by creating a relationship between the new and recurring motions. Enhancing and reinforcing this relationship is the "choreographed" sound. After sections of a work have been choreographed and assembled, a blank recording tape is used for each section rehearsed. With pencil and microphone, cues of mood, tempo, and changes are recorded. From the recorded tape, the score is then composed on the electronic synthesizer. (13) It is not unusual for the dancer to vocally accompany his own motion; this technique produces motion of greater quality and coordination.

The distinct advantages for having the dancer perform without musical stimulation include the following: (1) the dancer is forced to rely on the sense of the motion itself; (2) it prevents the dancer from being driven in a direction that might be a patterned procedure; i.e., ". . . music can give a certain meter, a certain pulse and the dancer 'potches' around that pulse." (74:89) And (3) left without a certain meter, the dancer may discover time and not meter, ". . . and time is more important than meter." (74:89) Just as movement does not qualify motion, rhythm does not explain the passage of time; time does not create order; it is order which creates time.

Nikolais' choreographic works are devoid of conveying a character or having a story line development. Essentially, his works are decentralized. No specific dancer is singled out as the hero or center of the event. Instead of drawing attention to the self, the dancer's energies are focused on the energy of the motion itself. For example, "A dancer performing a high leg-lift calls attention to the high leg-lift rather than to the dancer performing a high leg-lift." (54:81)

Therefore, the dancer attempts to make visible to the viewer a structure which exists in the environment outside of himself. Hence, the dancer does not speak from his own emotional content, but from the structure itself:

> The structure becomes a pathway or itinerary through which the individual shows his particular visions. For the dancer the choreographer mapped out an external itinerary which was illuminated according to the dancer's reception of the scenery through which he passed; each one brings his own vision to that particular thing. (74:46)

The means by which the dancer achieves the continuity, ongoing, flowing evolution of the total environmental gestalt is indeed a complex task. Nikolais insists on transcendance; i.e., the dancer transcends himself to create an illusion. Hence, the concreteness of the physical presence of the dancer is minimized. Having been stripped of idiosyncrasies and superfluous motion, "he must bring to even the most abstract piece something which is very primal . . . ." (29:43) He is called upon to make complex neuromuscular discriminations of bodily shapes, motion, environment and the evolving time of the created structure. Phrasing is built according to motor logic; time and stasis (silence) must be sensed as patterns of energy released in accordance with the

total environment. Trained to move in relation to space, the dancer articulates complex patterns of unusual postures, movements, body isolations, and groupings as they organically unfold, emerge, and occur in unified spatial designs. Props are manipulated into the choreographic patterns; so the dancer must attempt to extend his action beyond the physical limits of the body itself. His ultimate aim is to kinetically and intuitively fuse the content of the total, dynamic environment. Yet, under the demands, he exhibits a cool "exterior" presentation of motion.

The two final ingredients of the total theatre are light and color. To a great extent, the interaction of dance motion with other environmental elements is established through the use of light and color. Dimensions of time and space are changed; figures are distorted; the dancer's shape is made to appear transformed without motional change, and dancers appear to have transported themselves without a time/space existence. These are but a few of the created visual illusions.

Somniloquy (1967) is a dance exploring and discovering space. By the use of light, color, a scrim, and the cyclorama, two distinct sections of space and two qualities of events are quickly established. Figures are made to appear and disappear by bringing up and dimming out light behind the scrim. Barbara Nickolich precisely analyzed the technique:

> Detailed differences in color and texture of hair, body and leotard are erased by light; the emphasis is given to pure form, the total sculptural form of the human figure. Motional quality is affected by what appears to be an extension of time. Depending on the degree

> of illumination, emphasis can be placed on large motional changes rather than on details. Sequential changes in form are also emphasized. Whereas, in the content of the total ballet, intermittent illumination of events behind the scrim permits a fragmentation of time, motion in the brief event seems extended in time. In classical simplicity, the figures appear to be colored statues come to life . . . . As the dancer moves, there is a continual change and distortion of the pattern so that the original design is enlarged and extended. (54:81)

Other created illusions include the following characteristics: at times the dancer's motion is analogous to a film run at low speeds; slide projections from above and in front decentralize and mold the dancer's form; there is constant differentiation between the two sections of space and two qualities of events; isolated body parts (face, arm, leg) are choreographed by a narrow slot of light through which the dancer moves; lights move in a forward and backward motion to accompany the dancer's forward/backward motion; and slide projections are taken in and out of focus to further create illusions of the dancer's upstage/downstage motion.

From the flies to the floor, a three-dimensional volume of motion and light is created.

> Space as volume rather than space as a pattern of the floor has been a great concern of the Mary Wigman-Hanya Holm tradition . . . . Here an awareness of space as volume is extended beyond the dancer to the total stage space through motion and light. Rather than being ignored, the limits of the entire stage have been given an identifiable structure made visible by kinetics and light. (54:87)

In Nikolais' hands, the space between the proscenium arch becomes a microcosm; his unique, complex visions are expressed in the abstract metaphoric language of motion, shape, space, time, color, light, and sound. Although he asserts that all of the elements have

equal value, the stage space is enlivened and defined primarily through light and motion. (54)

Key Choreographic Characteristics

The articulate motion and space theatre of Nikolais is the epitome of non-objective dance. He structures the materials of his total theatre to speak for themselves; the major intent is to produce non-objective works which will communicate directly to the senses:

> The particular statement made for a given dance is expressed as a metakinetic communication of sculpted images of dynamic motion in space; by molding the abstractions of motion, space, time, shape, color, light and sounds he hopes to create "direct sentient communication." (77:189)

Organic continuity. The opening motions of a work become the building blocks for structuring the rest of the dance.

Primary qualities. Textures of movement such as light-heavy, thick-thin, soft-hard, small-large, etc.

Titles. Abstracted to prevent literal interpretation, bias, or preconceptions.

Illusions. Time, shape, space, and motion, designed to seem other than actual.

Total theatre. Sculpture is perceived as shape, music as sound, painting as color, dance as motion, and theatre as dynamics. (74) All are of equal importance.

Properties. Have equal value; they are choreographically an integral part of the dynamic environment; are used by dancers as extensions of motion.

Costumes. Used to depersonalize the dancer, and as a conveyor of connotations.

Time. Used in terms of duration of motion or stillness; i.e., the relative duration of movements--rhythm, accent, pauses, meter or nonmeter. (18) Time is considered more important than meter. (74)

Sound. Achieved by electronic or music concréte scores, and dancer's voice or clapping sounds.

Motional metaphor. Achieved by structuring an isolated mode of action (through the use of textures of light, heavy, thick, thin, soft, hard, large, small, etc.) from its original meanings. The direct relationship to its time, location, event or relevancy to a particular object is transcended. (74)

Structured light. Decentralized choreographed light design, from any angle or level, which may distort, compress, or alter the perception of shape, motion, time, and space.

Depersonalization. Non-objective or nonliteral pure and direct kinetic involvement; impersonal and connotative. Nikolais has been accused of dehumanization. However, his work as an artist and as a teacher is characterized by humanism.

Chronology of Innovative Techniques

Kaleidoscope and Village of Whispers signaled a break with the traditional patterns of modern dance. From 1953 through the late 1960's, Nikolais' choreographic innovations continued to lift traditional barriers.

Kaleidoscope (1953). Was a purely motional work; the human figure was abstract rather than a literal thing. (74)

Village of Whispers (1955). Was a collage (palimpsest) with no narrative sequence. (74)

Kaleidoscope (1956). Was an expanded version of the 1953 work. The dancers were accompanied by the newly invented tape recorder; body make-up fused dancers with total stage environment; stasis (stillness) was used as a valid choreographic element.

Prism (1956). A work in which light was choreographed to create and expand the illusions of time and space. "The choreographing of light and motion was so handled that a time/space warp developed." (54:81)

Allegory (1959). Exposed more elaborate variations on time structure; larger props were used, and the entire stage area was activated. (74)

Imago (1962). In which neutral titles such as "Group," "Quartet," and "Duet" were used.

Sanctum (1964). In which sections of the work were simply numbered as "Dance 1," through "Dance 10." (74)

Galaxy (1965). Innovatively used black light or ultraviolet light: forms "floated" in space; motion became intensified and abstract: the dancer's voice and an electronic background tape were used for the accompaniment; and structured improvisations were used for various sections of the work. (74)

Vaudeville of the Elements (1966). Contained more sections of structured improvisations. Two of the dances required that the dancer

carry battery-powered lights; the dancer's voice accompanied the structured improvisations; the choreographic work was devoid of mystical meaning: it was playful and had a childlike innocence. (74)

Premiere (1967). Was choreographed for Spring Mills, Inc. New extensions, environments, and structures were achieved through the use of slide and 16mm projectors with wide-angle lens and cooling systems; abstraction reached new dimensions.

Somniloquy (1967). Was a work which explored and discovered space. Props, colored abstract projections on cyclorama and scrim, choreographed light for isolated body parts, and battery-powered lights attached to the dancer's body were a few of the techniques that transformed the environment by a flick of a switch.

Tent, Echo (1968) and Scenario (1972). Continued pursuit to expand the characteristics which described Somniloquy.

Glossary of Nikolais' Terminology

Arhythmics. Composed in non-pulsed, nonmetered dance and music. Allows more freedom for the dancer, and stimulates a sense of immediacy of sensitivity in the audience. (74)

Art. Is illusion. When a dancer transcends himself to become something else, he creates an illusion. (74)

Artefaction. The illusion created by the dancer. (74)

Articulation. A dance as well as movement should be clear, distinct, and precise in relation to its parts; the parts of the structure are organized into a coherent whole. (74)

Composition. The perception of a subject and the presentation of it; the primary concern is with the discovery of a gestalt. (74)

Dance. Nonverbal communication between the dancer and his audience; the dancer creates an illusion in the mind of the spectator. (74)

Dynamics. The range and sensation of energy in action; can be illusion. (74)

Gestalt. The total unifying principle necessary for a beginning or starting point for composition. (74) The work must be perceived as a unity.

Gesture. A literal gesture cannot be considered dance. (74)

Grain. The direction of energy and force which is seen by the spectator. (74)

Improvisation. Is derived from a very primal source; uncensored motion. The value lies in the development of clarity or immediate response of the body to the impact of the mind. (74)

Lyricism. A quality of dance movement characterized by a flowing evolution, ongoing and with continuity. (74)

Medium. The motion created by the dancer. (74)

Metakensis. The empathy which the spectator feels toward the dancer; the dancer invites the spectator to become him--this makes communication possible.

Motional legibility. The selected kinetic and sensory perceptions that are communicated through motion. (74)

Motion. The illusion created by dance movement; the nature and details of action; the manner in which the action occurs. (74) Motion

requires that the dancer use many of his senses: kinetic, seeing, feeling, hearing, balance, gravity, sound, light, color, shape, and smell. (55)

Movement. As a gross act, it does not qualify motion; it implies a displacement of matter.

Mysticism. The nonverbal content of art is magic; it is not consciously understood, but one may grasp it through mysticism. (74)

Noumenon. A thing in itself; an idea or feeling. (74)

Palimpsest. Repeatedly drawing one thing over another on the mind so that the result is like a collage. (74)

Rhythm. A recurring dynamic is indicated. It is entirely possible to perform a dance without rhythm; the passage of time does not explain rhythm. (74)

Simplicity. The dancer achieves beauty through primal dignity and not through pretentious motivations. (74)

Stasis. Stillness is used as a valid contrast of motion. (74)

Structured improvisations. For designated sections of a dance, the choreographer gives the dancer a specific kind of movement to perform within a specific time limit. The decision for when the movement is to be performed is left to the discretion of the dancer. (74)

Symbols. "The perception of that which rests behind the immediate concrete surface." (74:118)

Transcendancy. The dancer subdues his literal character and focuses his attention to the motion, the shapes, and to the time and space in which these occur. (74)

MERCE CUNNINGHAM: CHANCE/INDETERMINACY

Introduction

The idea of chance is one of Merce Cunningham's most prominent legacies; that is, inherent in chance is the basic equality and uniqueness of all things. It would appear that his choreographic efforts have been attempts to free dance from traditional metric, spatial, and theatrical restrictions. Perhaps one of his most innovative gifts to modern dance choreography was freedom of structure. For example, although sections of a dance are developed phrase by phrase, the structure may be freely managed from section to section. Another innovation was the emphasis upon the development of movement phrases which originate in and out of stillness.

Cunningham was one of the first choreographers to free the dance from subjectively determined continuity. The old concepts of phrasing, sequence, stage space, and determinacy of traditional modern dance were modified. He did not accept the idea that dance had to be a pattern of virtuosic actions. (15)

Through the use of chance procedures and independent time structures, Cunningham has created one of the most innovative, complex, and unique non-objective choreographic techniques. Over a period of twenty years, his development has been extensive to the point of generating a whole new era of modern dance in America. Since the early sixties, many young choreographers have been exploring his ideas more deeply and making new discoveries. (15) Dance critic Clive Barnes states that, "He has done a great deal to demonstrate to an international audience

the peculiar thrusting, experimental quality of the best in American culture." (22:8)

Cunningham studied with Martha Graham, and was a featured soloist of the company from 1940 to 1945. It was during these formative years that he studied with and later taught at the George Balanchine School of American Ballet. He began presenting solos in 1944, with John Cage as his musical composer. Although his collaborations have included some of the finest contemporary artists of our time, it was the controversial, pre-avant-garde composer John Cage who clearly influenced his innovative non-objective choreographic techniques. (77)

Aesthetics

Cunningham treated music and dance as distinctly and completely independent activities that simultaneously occurred in a common time and place. It was in the early 1940's that he and John Cage initiated their theory of chance and the use of it in creating music and dance scores. Both felt that neither art form need function as a dependent of the other, and that dance and music could be advantageously freed of one another's syntax. (8)

A piece of music selected in advance did not determine the time; nor did the making of the dance determine the time. An arbitrary time length was decided upon by Cunningham before actual work on the dance was begun. Both Cage and Cunningham worked independently to fill in the structure with sound and movement. As a result, the music went its way and the dance went its way; that is, the dance and the music were separate, but both took place simultaneously within the same moment of

time. (6) Hence, Cunningham jettisoned the dancer's dependence on music; the support of the dance was not to be found in the music, but in the dancer himself. The result was that the independence of the dance from the confines of the music offered both media a higher degree of expressive freedom. (67) That is, the music didn't have to work itself to death trying to underline the dance, and the dance didn't have to create havoc in attempting to be as flashy as the music. (6)

The use of chance methods as a choreographic technique has been one of the most innovative and yet one of the most misunderstood approaches to modern dance choreography. Both Cage and Cunningham chose methods of composition that relied, to varying degrees, on chance procedures.

For Cage, inspired by Marcel Duchamp and the philosophy of Zen Buddhism, chance was a method of eliminating traces of his personality and self-expression from his musical compositions; that is, giving away the domain of human decision. (3) Mikel Dufrenne elaborates upon the complexity of the seemingly simplistic philosophy by stating that

> Freeing himself always means expressing himself, but it does not mean making a confession or an exhibition. More deeply, it means coming out of himself and getting rid of the self. He must gamble to lose himself, and his authenticity is proportionate to his abnegation. Hence, these strange, inscrutable, anonymous works produced by automatic writing, gestural painting and aleatory music. (32:12-13)

Cage went beyond the point of freeing himself from pre-established signs, habits, and constraints. He carried his chance operations to outrageous extremes; for example, his composition entitled 4' 33" consisted of four minutes and thirty-three seconds of silence.

Cunningham's use of chance as an approach to choreography does not describe an improvisatory performance situation. More correctly, it refers to a preference of random and accidental methods by which he found material for many of his early works. (2) Chance procedures afforded a way to avoid imposing the conscious or unconscious will upon his choreographic works. Within very strict arrangements, he used chance as a tool to find or explore possibilities beyond his reach; to arrange his materials into relationships that might not otherwise have been seen. (8)

> When I choreograph a piece by tossing pennies--by chance, that is--I am finding my resources in that play, which is not the product of my will, but which is an energy and a law which I too obey . . . the feeling I have when I compose in this way is that I am in touch with a natural resource far greater than my own personal inventiveness could ever be, much more universally human than the particular habits of my own practice, and organically rising out of common pools of motor impulses. (8:12)

Since 1953, Cunningham has been experimenting with a method called indeterminacy. Although this method has elements of chance, the choreography is not set down in definitive form. The material is completely choreographed, but the sections, order, durations, and combinations differ in each performance. Hence, the structure is discovered anew at each performance; although the materials do not change, they exhibit different qualities from one viewing to the next. An analogy would be Calder's mobiles. (8)

Clearly, the autonomy of the elements occurring simultaneously has faint echoes of the first "happening" at Black Mountain College in North Carolina in 1952. Both Cage and Cunningham organized and performed in the "happening." Historian Martin Duberman interviewed

Cunningham about the theory/value of the separate activities going on simultaneously:

> I think the value--if you're going to use that word--is in respect to the way life itself is all these separate things going on at the same time. And contemporary society is so extraordinarily complex that way. Not only things going on right around you, but there are all the things that you hear instantly over television, that are going on someplace else . . . that idea of separateness, of things happening at the same time . . . . (3:357)

The dance, then, is concerned with the single instant as it occurs within the fleeting moment; and it is viewed as a visible action of life. The intent is to wake up the life being lived.

Inheriting the space between the proscenium arch, his chance procedures decentralized and demagnetized the stage space and transformed the traditional ballet focus into an open field perspective; that is, there is no best stage spot. All areas of the stage are interesting and can be used; center stage is not a hallowed spot for special dancers. Regardless of how few dancers are on the stage, the space appears to be full. The dancers relate to each other, not to fixed points.

The spatial distribution of movement was reorganized in part by some of the unusual set designs and props; for example, Andy Warhol's silver pillows used in RAINFOREST. The de-focusing and equality of space opened for the choreographer a multi-directional, multi-facing point of view. Hence, since the spatial area is equal, the dance can be viewed from any direction; and each dancer is essentially a soloist. The choreography gives the dancer a given point in the dancing area; that point in space is center for him. (69)

The independent elements of a Cunningham work are often brought together in the last stages of creation. The disintegrated spectacle is in harmony with the Cage/Cunningham theory of autonomy and freedom of each theatrical element; that is, movement, light, sound, and decor. (8)

Cunningham has the ability to collaborate without threatening his own identity, or, for that matter, the identity of his partners. "Historically, Cunningham has been perhaps the best-known collaborator with musicians and visual artists." (59:12) Some of the prominent artists include Gordon Mumma, Frank Stella, Jasper Johns, Andy Warhol, Robert Rauschenberg, and David Tudor. Composer Gordon Mumma describes the collaborations:

> The best and the worst aspects of "grapevine" communications and telephone arrangements, the minimal specifications between choreographer and composer, the blended sense of freedom and responsibility, and a pervading ambiguity about details and commitments were nourished by Cunningham's immediate trust of his collaborations and his invitation to artistic risk. (8:65)

This extends to dancers too, Carolyn Brown contends that he does not inform the members of the company whether or not they will be dancing in a work until the selection is made obvious to all, and, ironically enough, they are not told the nature of the dance they are learning--no detailed consultations occur. After working for months creating and rehearsing a new dance, Cunningham

> will allow the light designer to plunge the work in murky darkness obscuring spatial relationships, cutting down the visual space, adding "atmosphere," altering what one might have seen by coloring it both literally and figuratively in any number of ways. (8:28)

However, since technical and dress rehearsals are omitted to save the dancer's energy, the light designer often works from guess work.

The light design has been called unstructured, improvisational, free, and chance-operated. Dance critic Marcia Seigel has an interesting theory about the light design:

> You can be subjected to Cunningham under the most severe conditions--endure blacked-out stages or spotlights piercing your eyes or demonic sounds--what makes you angry is not the dance, but your inability to see the dance. I think this is what makes Cunningham such a powerful force for change in our dance thinking. (61:13)

The theatrical elements of music, lighting, decor, and dance are left free to achieve their purpose within a given performance. The hands-off attitude is genuinely innovative. It provides a new source of patronage and a fresh point of view. More importantly, however, this process encourages the artist to rethink his work in the context of a whole new set of problems. This unique collaborative method does "reaffirm individuality, but an individuality strengthened by renewed contact with the structural clarity and humanistic vitality that all great art has in common." (59:13)

The method of collaboration significantly underscores the Cage/Cunningham philosophy of anarchy and coexistence; that is, the theory that each theatrical element requires autonomy and freedom.

Cunningham's primary concern is with human activity--he is interested in movement for its own sake. He is firmly committed to energy, expressed through the body moving (or still) in time and space. He enlarged the physical vocabulary of dance by transcending virtuosity; and, by adding the possibility of awkwardness, his choreography equally honors the arabesque and the limp. He obviously feels that a given amount of awkwardness helps the dance maintain a degree of liveliness.

Hence, the technique and choreography is based on the kinetic integrity of the body; not on heroes, emotions, or states of mind, but individuals. His work is predicated on the notion of individuals moving and coming together with the emphasis on the flow of events through time and space: movements which produce the process of natural changes and transformations in accordance with the basic laws of nature. (77) He contends that if the dancer dances, everything is there. That is to say that if the dancers dance well that should be sufficient for the audience and for the dancers.

Since Cunningham's style as a dancer partially defines the unity of his work, it is significant that his movement vocabulary be reviewed. His characteristic style as a dancer includes lightness, relaxed confidence, clean delineations, taut concentration, slow sustained qualities, hard thrusting qualities, rough-edged nonchalance, nervous tension, and comic absurdities. His feats of "suspended" balance are incredible--that is, his ability to create an illusion of resting his entire weight on nothing.

Moving from a quiet center, he communicates an enormous presence that is suffused with poetry, madness and mystery; he is capable of shifts of mood, temperament, and style. Often these qualities play upon one another within a single dance--within a span of thirty seconds. He is capable of executing sudden spurts of furious, fast movement and reversing direction on a pin point; and counterpoint movement which multiplies movement detail. For example, one body part moves in one rhythm while another part moves in a different rhythm.

He can make a movement look unstylized and natural so that it doesn't appear to be dance; that is, a delicate balance between feral grace and awkwardness. Carolyn Brown states that

> What looks on him like sheer brilliance and virtuosity and as natural as walking down the street, on someone else can look dull, or mannered, sometimes even foolish. Few dancers physically comprehend that deeper muscle knowledge of attack, what to make big and what to make small without any single action losing its energy. This knowledge Merce has; it is one of the qualities that makes him a great dancer. (8:22-23)

He can start a phrase with no sense of preparation or visible attack. The effortless movement creates an impromptu or experimental character to a complex passage. In essence, his technical innovations create an abstract, non-coherent, non-logical, non-narrative movement vocabulary. Clearly, his own innovations and negations lifted him beyond a synthesis of the Graham and Balanchine schools.

It is the technique that makes it possible for Cunningham to move his company dancers at great speeds with the security of expression; for example, whereas the classical ballet has its resources of air-work, his dancers are capable of performing incredibly rapid shifts of weight and directions with packed staccato changes of pace on the ground.

Cunningham and his dancers never prepare the viewer for the changing energies, speeds, and interactions with which they execute a work. Dance critic Clive Barnes asserts that

> The movements aren't expected, they are irrational . . . . Cunningham takes stylization to its ultimate absurdity . . . . With Cunningham it appears that one never begins to find an area of normal movement. His dancers do purposely strange things, he seems on purpose to alienate the idea of normality. But they do dance . . . . Cunningham's dancers bounce along their guidelines and perform with an ease as joyfully technical as, say, the technical flash of the Bolshoi ballerina. (22:4)

However odd, difficult, or unfamiliar the movement, there are no gimmicks. Both physical and mental demands of the dancer to cope with the subtle shapes and varieties of rhythmic nuances are complex. But when one sees the entire company hitting clear bursts of rhythms, frenzied action performed with control, and a series of remarkable phrases--all combined to give an effect of slow movement speeded up, one has ultimately seen the eloquence of a new vocabulary. When viewing a Cunningham performance, one is aware of his superbly trained dancers.

In summary, dance for Cunningham is not "about" anything; it need not tell a story or even concern itself with the psyche. Given the fact that dance was purified of literal meaning, it is not meaningless. It can and does connote or evoke responses; it can be poetic. Cunningham does admit that his works create some kind of atmosphere; however, he contends that movement does not convey meaning--it is the meaning. Therefore, his works are devoid of narrative, philosophical, psychological, or mythical pretensions. They are designed to "say" nothing; rather, they are designed simply "to be."

Choreographic Techniques

As early as 1953, Cunningham was experimenting with chance methods as an approach to choreography. The process involved the making of charts for different elements of a dance: tempo, direction, level, type of locomotion and movement, and solo or group movement. Coins were then tossed to determine the order in which the elements would go together. More charts were made for isolated body parts,

such as head, shoulder, feet, etc., which made the process more complex. Therefore, it became an approach for determining the sequence, duration and spatial direction of various movements within a dance--movements that had to be determined in advance--or for deciding the order of a dance's several parts. (67)

Currently, chance procedures are still used as a method of composing. Yet, unlike the early choreographic works, chance methods play a very minor role in Cunningham's creative process. Given the amount of time required for drawing up the many charts, chance procedures had to be whittled down considerably.

Through the use of chance/indeterminacy methods of choreographing, Cunningham sought to free himself from the limitations of his own imagination, and the dancer's habitual ways of moving. He changed the traditional logic of one event coming as a response to another; events now occur simultaneously. Thus, the viewer's habitual way of seeing dance has been altered. Dance critic George Bieswanger states that

> Habits of seeing dance are not easy to change. It took more looking at Merce Cunningham's dances than I like to admit to break out of the perceptual pattern by which movements had to be fitted to a regular rhythmic beat in order to go together. (24:13)

Therefore, a chance structure is set down in a definite form. That is, charts are made and coins tossed to determine the number of dancers, their spacing, tempo, frequency of movements, sequences, order of solos, duets, trios, quartets, movement phrases, isolated body parts, or any other element of a work one wishes to order by chance procedures.

Indeterminacy has elements of chance but the choreographic structure is not set down in a definitive form. The material is

choreographed, but is rearrangeable. For example, major sections can be rearranged for each performance. A more complex rearrangement would be when the dancers are allowed to choose spontaneously what choreographed material to perform, where on the stage and for how long, with whom to perform it, or to choose to perform none of the material. The majority of his choreographic works do not grant such freedoms; Cunningham's works that have been structured by chance/indeterminacy methods have been fully choreographed and rehearsed at length.

A variation of the indeterminate structure developed in 1964 is presently being used in his ongoing series of uninterrupted Events. The material for Events consists of excerpts from the entire company repertory, from which sections and single details may be extracted out of context and combined or reassembled into an unforeseen and novel unity. Two or more excerpts from completely different choreographic works can be danced simultaneously. (8) Choice of materials may be made before the actual performance; however, they are usually left until the moment of presentation in an effort to insure spontaneity. (43)

Cunningham prepares and rehearses the Events on the day of the performance. The following process is used:

> Its organization is transcribed onto paper and posted around the performance space like choreographic shopping lists to which the dancers refer throughout the performance to keep the evening's order clear in their minds. (8:14)

The audience and dancers are forced to experience the material differently, because the original costumes, decor, sound and spatial orientation have been omitted. In essence, Events have redefined the meaning of repertory.

The performances of Events have many important advantages: they provide the needed flexibility for the loss of dancers due to injury or permanent departure; they can be performed in gymnasiums, museums, and other non-proscenium places; they make possible greater collaborative endeavors than most repertory works; and unfinished choreographic works may be seen.

Since the dance coexists in time with the music, a time structure is designed in exacting units of time for which the dance will occur. Any number of equal or unequal sections can be made within the total time structure. For example, long total times are usually structured into combinations of long and short parts. A fixed time is sometimes adhered to; this provides the needed flexibility to discover ways of either speeding up or slowing down a particular step or phrase to fit it. This method changes the movement and serves to "shake up" familiar or established ways of moving. Therefore, much work is devoted to the experimentation of time as a way of structure, and, how the length of time can alter movement and change space. Accuracy of time is significant to maintaining the designed space.

> Change the space and the time changes, unless the space of the particular phrase changes in order to keep the time the same. Change the time and the space, and the movement changes. (8:24)

Group sections of a dance are sketched first; that is, unison movement phrases or sections. They are taught by repeated demonstrations and usually in silence. The additions and deletions are taught later. The complexity is increased by varying the material, rhythm, or space for individual dancers. Solos are demonstrated, but the

verbal directions are seldom precise. (67) Discussions about images, qualities, etc., are avoided. Carolyn Brown, company member for twenty years, states that

> The dances are treated more as puzzles than works of art: the pieces are space and time, shape and rhythm. The rest is up to us. We put the puzzle together making what we can, bringing to it what our imaginations allow. What we bring can enrich or detract from his work; Merce accepts that--it's part of the risk, part of the discovery. (8:24)

Each dancer is given the steps and bodily movements which have been worked out in advance; these figures become the raw material for the dance. The dancers are not expected to perform the actions exactly as they were demonstrated. "What I look for is a way to have the dancer move in the way he would move with the best amplification of that." (28:47)

Movements are changed if they do not seem to work well, or, if the dancer feels uncomfortable with the movement. For example, precise unison phrases are difficult to achieve because of the different body structures of the dancers. However, Cunningham contends that

> There's a point of balance--a point of tension--to which any movement, and with luck, I can transfer that to someone else. [sic] Sometimes it's not transferable--either the bodies won't do it or I can't translate it for them. But it's all in the body . . . . (67:54-55)

The dancers are individually responsible for working out spacing and/or timing difficulties with each other. Other problems will solve themselves, if the timing and spacing are correct.

Each dancer, in his own time and space, must kinesthetically experience the dance, for it is in this behavior that the dance is allowed to be a part of everyone. The experimental music, often heard

at the initial performance, is irrelevant as narrative. Dance accompanied by music robs the dancer of his instinctual rhythms and leaves him as a caricature. It is the dancer who creates the temporal structure, not the music. (8) The dancer dances through the music. (28) Thus, the mental effort needed to establish the strict order which supports each dancer's part is greatly intensified.

Rhythm comes from within the dancer--that is, from the nature of the steps, phrases, and from the dancer's own musculature. Carolyn Brown states that

> The concern with rhythm is first and this concern manifests itself in phrasing unlike any other I have seen or experienced in other modern dance technique . . . a "musical dancer" phrases from the muscles, the sinews, the gut, and the soul. Each movement is given its full value, its own unique meaning--the movement is expressive of itself. (8:22)

Since the rhythm comes out of the nature of the movement itself and the nature of the individual dancer, Cunningham works with a stopwatch. Although an enormous amount of sound and energy is generated from finger, hand, thigh clapping, and sonorous vocal counts, new choreographic movement and phrases are repeatedly rehearsed until they find their own "inevitable" time in the designed space. Sections are often counted aloud while being timed by the stopwatch.

After months of rehearsing, the time of each part and the time between the parts are sensed; the performance is executed by <u>time sensed</u>, <u>event sensed</u>, and by the muscle memory of the dancer's body. The dancers rely upon their interior time and their remembered relationships to one another and the space. A rehearsal that is two and a half minutes fast is considered to be a total disaster. (8)

Thus, having acknowledged dance as having an entity of its own, the choreographic works are carefully built on a time structure of subtle, clear, and complex body time sensed rhythms of irregular phrased lengths. Cunningham's special concern with rhythmic variety and passion for movement is intense to the point that rhythm is not sacrificed for the clarity of shape; the ". . . force of feeling lies in the physical image, fleeting or static. . . . Its meaning is the instant in the eye and ear, and its continuity is change." (2:118, 69)

Chance/indeterminacy methods produce a fragmentation of movement which projects dynamics of changing qualities. For example, four solos performed simultaneously can be densely overlapped at one moment, and sparsely separated in the next moment. Therefore, the created space is related to the dynamics of the dancer's movement. (8) Cunningham states that

> The dancer is given a point in space . . . that particular moment in time concurrently is center for him and he stays or moves to the next point to the next center. Each dancer has this possiblity. (2:34)

The de-focusing and equality of space resulted in a multi-directional, multi-facing point of view which essentially made each dancer a soloist. (69) This is to say, that regardless of <u>where</u> the dancer danced, that area was center for him. Also, Cunninghma's principal concern for space is for the locomotor movements which carry the dancer through space, not only into space. (2)

Coherence is achieved by how the dance is performed. For example, a dance may begin with the purest classical grace, and then be continually broken up by a cessation of sudden jerks, and abrupt

changes. Or a dancer's arm may be elegantly extended, while the other arm may dangle disinterestedly. (46) This discontinuous abstraction is one of the stylistic marks of his choreography; but they are performed with a perfect kinesthetic continuity that makes everything look right. They are clearly danced with an impersonal concentration on the material.

Cunningham's works reflect a keen sense of immediacy; that is, richness of spontaneous movement. Counterpoint is achieved by the result of the independent action of the dancers whose spatial action is one of revolving orientation. For example, given a dance where each dancer is taught the same material, and is free to choose spontaneously what parts and order he wishes to perform (as in Events), a counterpoint may be achieved by the correspondencies of the choreographed material, and by each dancer's simultaneous execution and presentation of the material. (8)

An incident in a Cunningham dance has no specific meaning; it is suggestive and open to multiple interpretations. The human element may be revealed through the time-space continuum, but the focal interest lies in time, space, and motion.

Key Choreographic Characteristics

Cunningham never ceased to alter his choreographic procedures whenever it suited him. The innovations of chance/indeterminacy unlocked his imagination from its own clichés, and served as source of inspiration and freedom to artists associated with him.

A kind of anarchy was established where people could work freely together. (66) Clive Barnes states that

> More and more the artist is a man bringing something to our attention just to make of it what we can. Cunningham seems very much an artist of this time, a man who instinctively knows where most pointedly to point. For this reason, I always find Cunningham one of the most rewarding of our contemporary artists. (22:4)

A new generation has discovered the uniqueness of his non-objective dance, and has found it to be comprehensible in their own terms.

Action as duration. Metric order was replaced by the stopwatch; action is treated as a measure of distance from one point in space to another. Collage-like actions appear to grow out of the void of space.

Stillness. The inner and outer immobility of motion serves to heighten action; movement becomes more clear if the space and time around the moving are of its opposites. The action-stillness is dissociated from psychological meanings.

Symbolic dissociation. Movement is removed from literal meaning; it is meaning.

Continuous artistic experimentation and discovery. A forward-looking choreographer involved in discovery. Creative energies are geared to self-discovery, and to areas new to himself.

Chance/indeterminacy. Ordering of individual performer's movement-stillness scores.

Personal rhythm of performer. The rhythm comes out of the nature of the movement itself and the nature of the individual dancer.

Tempo and dynamics. Are determined by the performer.

Non-sequitor relationships. Unlike the traditional choreographic techniques of the classical ballet, the juxtapositions of movement, sound, light, and decor create a discontinuous abstraction and immediacy.

Independence of dance and music. The dance coexists in time with the music; that is, treated as separate entities with determinate time. They are related simply because they exist at the same time.

Sound. Electronic organization of sound is either live or taped. Some electronic scores are constructed in inches per second. Thus, rehearsals and performance of dance are changed in relationship to seconds and minutes.

Stage decor and costumes. Are often bizarre; for example, pointillist design on leotards and tights; and newly created designs for each performance of a work.

Chronology of Innovative Techniques

Since the early 1940's, Cunningham's choreography signaled a dance form which demonstrated the primacy of sheer movement over the domination of music or scenario development. Within a twenty-year span, the more than fifty choreographic works reflect kaleidoscopic changes of tone and mood.

Time structured dances began in 1944 with Root of an Unfocus. Chance methods began in 1951 with Sixteen Dances for Soloist and Company of Three. Indeterminate methods began in 1953 with Dime a Dance. Events have been performed beginning in 1964 through the present time.

Cunningham's darker works, which seem to come from a source of movement energy that is dramatic, include Untitled Solo, Changeling, Lavish Landscape, Crisis, Collage I and II, Winterbranch, Place, and Rainforest. These dances appear to be more tightly choreographed. Newer works such as Scramble and Walkaround Time are less rigidly structured because of the diversity of the dancers created by a turnover of personnel. The lighter works include Ragtime, Dime a Dance, Paired, Field Dances, and How to Pass, Kick, Fall and Run. Some of his more established works include Suite by Chance, Fragments, Summerspace, Rune, and Aeon. His longest works, made from 1964 through 1974, include Winterbranch, Place, Rainforest, Walkaround Time, Canfield, and Landrover.

Choreographic works structured by indeterminacy include Rune, Story, Field Dances, Scramble, Canfield, Signals, Landrover, TV Run, and Changing Steps. (8)

Root of an Unfocus (1944), consisted of three long sections. Structure was based on time; for example, analogous to a radio show divided into time units; the dance and music came together at the beginning and end of each unit, and in between they were independent of each other. (67)

Sixteen Dances for Soloist and Company of Three (1951) was a work for which coins were tossed to determine the order of a series of solos, duets, trios, and quartets. The overall rhythmic structure related to small parts of the large in both dance and music; form-objects in space related to time; that is, the relationship was established by the dance joining with the music at structural points.

The nine permanent emotions danced were ordered by chance. (28) In one small section, the sequence of the movement was determined by chance. (9)

Collage (1952) used musique concréte; based on the theory that any and all movements were, in principle, available to choreography, non-dance movements were used; for example, combing hair, brushing teeth, etc. (46)

Suite by Chance (1953) was the first dance in which all possible elements were made with the aid of chance methods. (8) Movements were purposefully made unadorned and flat; body parts and the order of sections were determined by chance. (46) Stillness-held positions were used, stage space was defocused, and the multidirection choreography could be seen from any direction. (2)

Dime a Dance (1953) was choreographed by chance, and the structure was indeterminate. When first performed, the audience determined the sequential order by paying a dime to draw from a deck of cards. (8)

Untitled Solo (1953) was the first trilogy of solos concerned with the possibility of containment and explosion being instantaneous, and simultaneity of action was applied to the dancer's body. The separate movements were arranged in continuity by random means allowing for the superimposition of one or more, each having its own rhythm-time length. The result was a concentrated fragmentation of movement, and the creation of unusual coordinations extremely difficult to perform. (9) Space was chance determined; that is, lines in given directions, and whether in straight or curved proportions, the lines

were determined by the space charts. Chance operations were used to give decisions as to how long a given sequence should take. (2)

Summerspace (1958) was a lyric work. The pointillistic backdrop and matching leotards and tights were designed by Jasper Johns and Robert Rauschenberg. This decor animated a large visual field where the dancers seemed to disappear into the backdrop whenever they ceased to move. (67) Space was defocused; the center of interest was everywhere; focus was full circle including the radius of the dancers and the audience. (2)

TV Rerun (1962) was performed by any number of dancers. Each dancer was taught the same material, and each was free to choose spontaneously in performance what parts of it to perform. The impact was dependent upon the counterpoint/fugal correspondences of the choreographed material, and upon each dancer's execution and presentation of the material. The music, composed by Gordon Mumma, consisted of elastic belts containing acceleration sensors and radio transmitters. These belts, worn by the dancers, permitted the dancer's movements to be translated into audible pitches, which were transmitted to special equipment in the orchestra pit, and heard from loud speakers around the audience. The nature and continuity of the sound became the collaborative responsibility of the dancer. (8)

Winterbranch (1963) used light design which was varied for each performance so that the rhythms of the movements were accented differently, and the shapes were seen differently, partially or not at all. The structure was simple and designed to change its order from performance to performance. Two electronic sounds, one high and one low,

were played loudly over loudspeakers. The choreographic motif was derived from the physical gesture of falling. (2) Although an illusion of otherworldly or nightmarish effect was created, the entire dance remained characteristically indefinite. (8)

Story (1963) utilized an indeterminate structure in the dance, music, and decor. Rauschenberg made a new decor during each performance, the dance was made for any number of dancers, and the length of the dance was made to vary. For example, it has been as short as fifteen minutes and as long as forty. The variables in the structure, which changed for each performance, included the length of the whole dance and the length of the separate sections, the placement or order of the sections in continuity, and the relationship of the sound which was constantly varied. The only agreement between the dance and the sound was the length. (28) Within a section, the movements given to a particular dancer could change in space and time, and the order the dancer chose to do them in could come from the instant of doing them. The dance was made up of a series of sections, solos, duets, trios, and larger units that could go freely from one to the other, so their order was changeable. (2) The sections were given names for means of identification--for example, "Object," "Triangle," "Floor," "Tag," "Space," "Entrance," etc. For "Object," an actual original object was constructed and moved and carried around on the stage. "Floor" referred to a slow tempo duet for two females which could begin at any point in the space, on or off stage. The "Five-Part Trio" consisted of three dancers who had five swift phrases to dance. In total, the entire work consisted of eighteen parts; all or any group could be danced in a given performance. (28)

Field Dances (1963) was structured for any number of dancers, and used determinate and indeterminate structure. The duration of the dance was indeterminate. The dancers were presented a vocabulary of physical gestures from which they were free to develop their own syntax for the performance, and the individual dancers chose whether they would perform in it at all. In some instances, non-company dancers were included in the performance. (8)

Event #1 (1963) consisted of excerpts from the repertory, and was performed without intermission in nonproscenium places. The structure was indeterminate. It was the first of many in the series of Events that would be continued through 1975. (28)

Variation V (1965) established a coexistence of technological interdependence and artistic nondependence. (8) It was the largest step taken to further explore chance procedures, theatrical innovations, and electronic technology. Radio antennas mounted on stage responded to the motion of the dancer's body with hums and buzzes; a new electronic score was created for each performance. Upon a huge background screen six projections simultaneously showed rapidly juxtapositioned scenes of war, food, politicians, dancers, riots, trees, and prize fights. The work was concluded by Cunningham's riding a bicycle on stage. (67)

Walkaround Time (1968) is considered to be one of the most exquisite decors ever set within the proscenium arch. Artist Jasper Johns transcribed Marcel Duchamp's major work, The Large Glass, for the set design. (4) Part of the choreography included a stage intermission: house lights went up, the sound system played atypical music,

and the dancers broke their formal postures to talk with each other, don warm-up clothes, etc. (46)

Paired (1968) was a duet performed only by Cunningham and Viola Farber. Structured by chance, it consisted of nine events performed together; the sequence was determined during the performance. Both dancers made exits at various points to smear hands with paint from cans in the wings. The color of paint daubed on each other was the movement cue for one of the nine events; for example, leg kicks = Viola Farber (red paint); dropping = Cunningham (black paint); separate = Cunningham (yellow paint). (2)

Canfield (1969) consisted of an indeterminate structure, and had thirteen sections with interludes between each. The sections and interludes were rearranged in a different order for each performance, usually on the day of the performance. Not all sections were necessary for a performance; thus, the continuity was different for each performance. The length of a performance varied from 20 to 105 minutes. The tone of the work was one of extreme contrast; for example, elements of lyrical-surreal juxtapositions, etc. Artist Robert Morris designed the decor, consisting of irridescent grey leotards and tights worn by the dancers. They were lit by a slowly sweeping aircraft light that extended vertically from downstage floor to a place above the proscenium arch; the light was interrupted by encounters with the dancers. The effect on the dancers was one of an intermittently florescent population of a lunar landscape. Composer Pauline Oliveros wrote an open-ended score which consisted of three pages of typewritten instructions. The instructions specified the nature of the equipment which the musicians had to

obtain or develop, and the characteristics and continuity of the performance with the specified equipment. (8)

The production of Events increased in 1972. All of the performances, with the exception of Canfield in 1973, were Events.

Glossary of Cunningham's Terminology

Aleatory. Chance determined.

Alogical structure. Performed units that do not pass information back and forth or "explain" each other. The units remain intellectually discrete; each is a separate compartment. The structure of music, abstract or non-objective painting and sculpture is alogical. (43)

Chance. A method for creating and performing. In some instances, charts are made to determine the number of dancers, their spacing, tempo, frequency of movements, sequences, order of solos, duets, trios, quartets, movement phrases, isolated body parts, or any other element of a work one wishes to order by chance. (8)

Clarity. Is directly related to good technique and a concentration on what the body is performing.

Continuity. Dancing has a continuity of its own. "It need not be dependent upon either the rise and fall of sound, or the pitch and cry of words. Its force lies in the physical image, fleeting or static." (2:118)

Defocus of space. Unlike the frontal, two-dimensional spacing of the classical ballet, every place and everyone on stage is of equal interest and importance. The dance can be viewed from any direction.

Events. An anthology of excerpts from the repertory performed without an intermission in nonproscenium places. (39)

Form. It is the objects in space relating in time; for example, the relationship pointed out by the dance joining with the music at structural points. (28)

Indeterminacy. A method of composing; it has elements of chance. The order of the sections can be changed; that is, the choreographed material is rearrangeable. (8)

Music. Coexists with the dance; that is, being related simply because they exist at the same time. (2)

"Musical Dancer." Rhythmic phrasing from the dancer's own musculature, as opposed to the imposed rhythms of music. (28)

Rhythm. Comes from the nature of movement itself and the movement nature of the individual dancer. (28)

Simultaneity. A choreographic technique whereby each dancer is doing something different at the same time; for example, dancers performing different material at the same time. (28)

Space. The principal concern is for steps that carry one through space, and not only into space. Shape of space, for example, would refer to the way the space was covered--straight lines, diagonal, etc. (28)

Stillness. Held positions by the dancers, who seem still internally as well as outwardly. (1) It is a deliberate span of time which has as much expressive power as energetic movements. (67) "Movement becomes more clear if the space and time around the moving are of its opposites--stillness." (6:402)

Structure. The means of arranging the continuity of events in time. (50)

Style. The exposure of the dancer's being appearing through the dance. (2)

Technique. "The danger with acquiring a technique is that it can constrict, can make you think that's the way you have to do it; the lively part of it can be if it makes the way you would naturally dance more natural and extends what fits you." (2:56)

Time structure. Designed exacting units of time within which the dance will occur. (8) The specific number of parts and the time allotted for each.

Titles. ". . . Do not refer to any implicit or explicit narrative, but to the fact that every spectator may see and hear the events in his own way." (2:136)

JEANNE BEAMAN: COMPUTER GENERATED CHOREOGRAPHY

Introduction

Jeanne Beaman's pioneer work with computer generated choreography served as another approach to producing non-objective dance. Using the computer as a creative tool she developed an innovative non-objective choreographic technique which freed the choreographer-dancer from his habitual, self-imposed limitations and sterility. It provided a more flexible, creative, and objective approach to choreography, and served to foster creative thinking into fresh and challenging channels. Equally important, it allowed the choreographer-dancer to make the aesthetic choices. (41)

Beaman's early training began with the classical ballet. For example, she studied and performed with Adolph Bolm and Michel Fokine. Her training in the modern dance began with Hanya Holm, Martha Graham, Louis Horst, and Doris Humphrey and Charles Weidman at Bennington College in 1938. Her background training also included further study with a number of other outstanding modern dancers, notably José Limon, Mary O'Donnell, Gertrude Shurr, and Merce Cunningham.

As a teacher of the dance, she held college positions from 1942 through 1974. It is significant to note that although she was steeped in the ballet and classical modern dance, her pioneer work with computer generated choreography served as a point of departure from the choreographic approaches of both the ballet and classical modern dance.

Her innovative non-objective choreographic technique should stimulate, inspire, and challenge other dance educators to more creative endeavors. Being cognizant that art becomes more viable when it is free of inflexible rules and limitations, her search to know more about how to promote individual creative growth was constant. And in this task, she was keenly aware of the kind of growth she chose to cultivate. Beaman realized the problems inherent in the indeterminate-random methodological approach to choreography; she gave her student/dancers the simple guidelines they needed, not "rules."

Aesthetics

It would seem that the technological influences on art and the artist have never been greater than they are today. There are not only many promising techniques ready and waiting for the artist, but also he

has begun to make use of them. Since the artist does not usually have the training and skill to put these techniques to work, collaborations with engineers and scientists have been necessary.

Beaman did not reject the materials and tools that most appropriately reflected our culture. She openly welcomed the synthesis of art and technology as being quite proper and very much to the point. Her interest in computer generated choreography was inspired initially by Merce Cunningham's *exploration of chance choreography*. Her impression was that the computer could accomplish this process much faster.

While professor of dance at the University of Pittsburgh, Beaman began her ventures into computer generated choreography. The rationale behind this approach was an attempt to free the choreographer-dancer of the sterile memory bank of cliché movement patterns and choreographic ruts; that is, to release the programmed muscles and thinking processes. Therefore, the computer became a creative tool for choreography which broke the bind, and provoked the choreographer-dancer's thinking into fresh and challenging channels. She also discovered that the computer could provide insights and movement possibilities that perhaps could not have been ascertained by simple human analysis. For Beaman, the use of the computer made possible the control of the amount of material that would have been too fatiguing to achieve otherwise. The use of the computer also made possible the acquisition of new combinations that might not have been produced by other methodological approaches, and the development of a kind of objective attitude toward the data.

Beaman's most significant accomplishment was that of developing a choreographic technique which helped provide the choreographer-dancer

the needed flexibility to make the aesthetic choices; that is, the right to accept or reject the computer permutations. For example, a computer generated dance print-out describes the movement to be performed, its duration, and its direction. It does not give specific directions pertaining to how the quality or intensity of the movements are to be performed. This built-in flexibility allows for a variety of responses. Thus, dancers using an identical score (print-out) can produce different dances. (78)

To give further clarification of her choreographic technique, Beaman compares the use of random indeterminacy with a painter's technique:

> He uses a technique which invites chance effects because these sometimes yield forms he never in his conscious thinking could ever have invented. In effect he speaks to his canvas with his medium and his medium talks back to him. Painting for him is thus an exciting performance which he later decides to sign or to paint back over with white for a new beginning. Computer choreography is exactly like that and once the choreographer has made a conscious decision to accept what chances forth, from that moment on it is no longer chance which operates but choice. (78:4)

The point to be made here is that Beaman's computer generated choreography is designed with forethought and care. Her computer generated STATIONARY DANCE (1968) is indicative of how the use of the non-objective computer techniques can transcend its first appearance of disorder to another level of order. It should be stressed that when chance methodology is used extensively enough it does not necessarily produce a disorderly or accidental-appearing distribution.

Beaman's computer generated technique thus far is a "sophisticated way of shaking dice with added virtues of speed, complexity, and

memory bank." (78:14) In all of her computer dances, the restrictions of the computer print-out are integral to the conception. The artistic stimulus achieved by this technique is analogous to a musical score in that it may or may not lead to a good performance. The quality of the results is directly dependent upon the expertise of the people, both technically and choreographically, who work with the print-out. Therefore, it is the capability of the dancers and the choreographer which ultimately determines the quality of a computer dance. Beaman asserts that, for her, computer generated dances have been thoroughly satisfactory, "and it is where I have wanted the time--and dancers--to explore." (79:2)

However, her successful endeavors have not been accepted without suspicion and doubt:

> My students react, as almost everybody does, with horror at the whole thought of a computer telling you what to do. People either immediately decide it looks mechanical and they don't like it, or they like it because it is a new gimmick, and neither of these is a valid judgment. The dance has to stand on a more fundamental aesthetic than that. (27:29)

In 1971, a colleague refused a request to introduce Beaman at a major dance conference because she was completely antagonistic to her computer dance approach. In response to negative criticism about her work, she has found that her computer generated dance "could stand up and be judged by those same standards normally applied to concert pieces." (78:1)

With the exception of Beaman's pioneering work in computer dance, other exploratory ventures made in this field have been scattered and minimal. Dr. A. Michael Noll, of the Bell Laboratories in New Jersey,

has explored ways of using the speed and analytical tools of the digital computer for structuring more efficient methods of notating and choreographing. To date, these explorations have had little impact on dance.

Computer generated dance is still in its transitional and developmental stages. Both Beaman's and Noll's research explorations and developmental techniques point to an exciting and challenging field that deserves further attention. Some of Beaman's projections for future developments include the use of computer choreography as a teaching device for children, programming many of the principles of choreography, and more collaborations with other artists. (78)

Realizing that her approach was a radical departure from the traditional approaches to choreography, Beaman saw a need to share her innovative techniques and developments. To this end, she is presently working on the manuscript for a book to be entitled Computer Dance Workbook.

In summary, Beaman was acutely aware that previous training in dance could result in a stifling memory bank, and she eagerly broke the firmly set muscle/mind bind by exploring the element of chance found in computer generated choreography. This fresh approach stimulated creative thoughts and ideas, and it produced movement combinations that were unique and challenging.

Given the technical data for the program, the computer is capable of objectively generating any number of different permutations, or arrangements of materials, for a single dance. The computer program was purposefully designed to allow the choreographer-dancer a flexible combination of both control and freedom. The computer can be instructed

to select materials at random, or it can group materials in a definite pattern. It can be instructed to combine these methods.

Some of the variable controls may include the given amount of material for a specific dance, the given number of dancers, the given spatial area in which the dancer and/or dancers are to perform, and the direction in which the dancer or dancers must move in the designated space. It is possible that any or all of the controls could be left to chance. This means that the variable controls may be controlled by the choreographer, or the choreographer may wish that the variables be randomly determined by the computer program.

The choreographer-dancer is given the freedom to accept or reject the computer permutations. Once the choices have been made, the indeterminate chance element becomes determinate. However, the computer print-out leaves the quality and intensity of the choreographic statement open to the dancer's individual interpretation--that is, the dancer's intuitive reaction to reading the score. Therefore, the way in which the choreographer-dancer handles the space, time, and force, and how he chooses to resolve and join together each line, ultimately determines the meaning given to the dance. (78)

Clearly, then, Beaman's non-objective choreographic technique searches to find the "soul" of the dance, which is then made tangible in the performance. (79) Her dances are analogous to blank structures; that is, the choreographer looks at and reads the print-out, and it tells him what it is. He then shares the information to help others get into the work. The blank structure allows the essence of an idea

to be filled with meaningful content. The individual performances are determined by whatever was meaningful for and to the individual performers.

Beaman's major intent is to make a direct sentient communication--that is, the dance is perceived by one's senses. Being eclectic in her movement choices, she freely draws from any style or form to carry out a computer direction. She allows her dancers the freedom to solve the problem of carrying out the directions in their own way. "I only demand in my work with them that they be accurate so that if one were to read the score and watch the movement line by line, one would see a one to one relationship." (79:4)

Choreographic Techniques

Beaman's pioneering work with computer generated dance began at the University of Pittsburgh in 1965, where she collaborated with Paul Le Vasseur and Dale Isner. Isner, assistant instructor in computer science, developed the Pitt Natural Language Process (PNLP), called PENELOPE.

The technical data for Beaman's computer generated choreography required close collaboration with Isner. He developed the algorithms and programs to produce the computer generated dances. Isner describes the initial phase of the development of the computer process:

> . . . our algorithm consisted of defining a dance as a sequence of steps, each step of which consisted of a duration, a movement, and a spacing. Jeanne Beaman then proceeded to construct a set of phrases for each of these three activities and a program was written which read and constructed a list of durations, a list of movements, and a list of spacings from these phrases. A dance step was

> then constructed by randomly picking a phrase from each of these lines and generating a sentence composed of them. A dance was then generated which consisted of a number of steps produced in this manner. (41:1)

To further clarify, the above process basically consists of an algorithm, whereby a dance is defined as a sequence of steps, with each step consisting of three categories of a duration, a movement, and a spacing. (An algorithm is the step-by-step procedure used in defining and breaking down the problem to be solved so that it can be programmed for the computer.) The choreographer then proceeds to construct a set of phrases for each of the three categories. A program is then written, consisting of the numerically coded input (a process whereby numbers are assigned to specific movements, directions, or anything else requiring such coding). The program then reads and constructs a list of durations, a list of movements, and a list of spacings from these phrases. The program instructs the computer to select randomly a phrase from each of the three categories, thereby generating a sentence (line) which is seen on the resulting print-out sheet. Thus, any number of sentences (lines), as instructed by the computer program, may be produced in this manner. The computer print-out, consisting of these sentences (lines), becomes the dance score to be performed by the dancer. Once the choreographer accepts what chances forth on the computer print-out, it is no longer chance but choice. That is to say, the way in which the choreographer-dancer chooses to resolve and join together each sentence (line) ultimately determines the meaning given to the dance.

The first print-out was complex and posed many problems which had to be solved. The single-spaced print-out was difficult to read, so subsequent print-outs were double-spaced. Long print-outs were shortened; ten lines were found to average approximately ten minutes. Confusing vocabulary had to be made clear by substituting other words. For example, the term "lunge" replaced the term "en garde."

Having solved the problems, Beaman increased the number of items to eighty for each movement, space, and duration category by writing additional permutations of specific commands. A partial list of some of the items that were used include the following:

Movements

1. walk, legs bent
2. walk, 1 leg straight, 1 bent
3. walk on heels
4. walk on toes
5. walk heel-toe
6. walk toe-heel
7. walk flat footed
8. eyes only
9. mouth only
10. right hand only (left hand only was in first program)
11. left arm only (right arm only was in first program)
12. kick left leg (kick right leg was in first program)
13. clench fist
14. flex right knee
15. flex right knee and rotate lower leg clockwise
16. flex right knee and rotate lower leg counter clockwise
17. rotate right shoulder clockwise
18. rotate both hips clockwise
19. skip

Movements [directional commands]

1. circle clockwise
2. circle counter clockwise
3. make a triangle
4. make a square
5. alternate forward and backward
6. alternate zigzag to right and zigzag to the left

7. alternate an arc forward and backward [an arc is half of a circle]
8. stay on the floor for one line
9. stay on the floor for two lines
10. stay on the floor for three lines (78:7-9)
etc., etc.

The above directions were programmed to produce the computer print-out. The materials were then used to choreograph STATIONARY DANCE. (78) This work was filmed for showing at the Cybernetic Serendipity: The Computer and the Arts, at the ICA-NASH House exhibition in London, held at the Institute of Contemporary Arts from August 2 through October 20, 1968. The purpose of the exhibition was to

> . . . present an area of activity which manifests artists' involvement with science, and [vice-versa] . . . also, to show the links between the random systems employed . . . [in the arts] and those involved with the making and the use of cybernetic devices. (73:158)

The three sections included in the exhibition were computer generated graphics, cybernetic devices as works of art, and machines demonstrating the use of computers. (73)

Given the fact that the computer print-out did not give specific performance directions, two subsequent performances of the same work were rendered quite differently. For example, in the first performance colors of black and white costumes helped to initiate a maximum range of contrast between the two dancers; the music was an electronic metronome. The second performance included soft hues, with a drummer seated on the stage. The space restriction, defined by the computer, created a "strong emotional tone of frustration--one figure trying to reach the other always in vain . . . ." (78:19) Beaman danced half of the duet as a third performance. The effect was that of an emotional

expressionist piece. Some people were shocked to learn that the dance had been choreographed by a computer. (78)

The phenomenal fact about this process is that, from Isner's initial program for the original STATIONARY DANCE, the choreographer could ask for the print-out of 50 additional "Computer-Random Stationary Dances," and could receive 50 additional dances of the same number of lines, but with different directions. (79) The final computer data bank consisted of eighty movements, eighty directions, and eighty durations.

Utilizing the initial materials as a methodological approach for the teaching of dance, it was found that ". . . these dances provided an enjoyable and meaningful method for developing the students' skills and allowed them to exercise their creativity." (41:1)

From this successful and satisfying endeavor, the second experiment was that of expanding the program to include the manipulation of several dancers on the stage simultaneously, and allowing additional input parameters to control the randomness when desired. Both programs were written in PENELOPE. The original copy of PENELOPE is included in Appendix B, pages 181-82.

The following grid layout of the stage was developed for the program. Each numbered area is called a node.

	13	14	15	
12	1	2	3	16
11	4	5	6	17
10	7	8	9	18

Audience

Figure 1

Grid Layout of Stage

Numbers 10 through 18 were considered off-stage, and numbers 1 through 9 were considered on-stage.

> In addition to providing phrases for the duration, movement, and spacing of the dance as input to the program, one can also provide ordered pairs of numbers, naming two sections of the stage in each pair to control the random stage movement. Considering the eighteen stage sections as nodes in a directed graph, one then has the capacity of inputting the arcs of this graph. If for each square, movement to all its "neighbors" is allowed, then random stage movement is achieved. However some control can be achieved up to the limit of no change in stage position by allowing movement only from a square to itself as illustrated in STATIONARY DANCE. (41:2)

In other words, this process allowed some control from the almost complete randomness. The establishment of the grid was a way of controlling the area of the stage where the action was to take place. Hence, once the grid was established and the program written, the dancer would be directed to move to a particular grid spot.

Additional control of the direction of the movement on the grid was achieved by giving the dances titles which were indicative of the given movement directions; for example, Right to Left, Once Off Stay Off,

and Forward and Back. Reversals are also possible, such as Left to Right, Once On Never Off, and Back to Front.

The duration and/or time of the directions was achieved by allowing the individual dancer to decide on the pulse. For example, one slow pulse would be counted as four beats; one medium pulse would be counted as two beats; and one fast pulse would be counted as one beat. ". . . five medium beats could be counted as 12, 22, 32, 42, 52 as a musician counts measures. Two slow beats would be 1234, 2234 at the tempo of the selected pulse." (78:10) For durations requiring a gradation from slow to fast, the dancer counts the phrase as he feels it. A metronome reading could be used for establishing a pulse for a group of numbers. It is possible to keep the pulse with handclapping, vocal noises, or audible counting.

The treatment of a triplet direction was a problem. In future programming it may be omitted. Musicians suggested that two fast triplets be counted as 123, 123; two medium triplets would be counted the same way, but each count would take two pulses. (78)

Directional commands such as a zigzag would be performed by the assumed dictionary definition: a line, course of progressions characterized by sharp turns first to one side then to the other. Another directional command, which had to be constantly sharpened in the execution of the dances to maintain clarity, was the word "arc." The arc was defined as something bow-shaped or any part of a circle. For other directional commands such as squares, triangles, and pentagons, the dancer has the flexibility of performing them as a path on the floor, or as a path or design in the air. For example, the print-out

might read "flex the right knee, make a triangle, four slow beats." The dancers may interpret the directions in the following manner:

> The dancers flexed the right knee, braced the right foot against the left knee of the supporting leg thus forming a clear triangle. In addition both arms were bent, palms to the chest and voilā, two more triangles. (78:11-12)

Even though the print-out may call for impossible movement direction combinations, Beaman did not eliminate the possibility of such random choices. Instead, she searched for a solution; for within the process of attempting to solve the problem, new movement discoveries were found. "It is the challenge of the restrictions inviting one to relate previously unrelated lines of movement which is exciting and habit breaking." (78:5)

Beaman demands clarity of interpretation and performance from her dancers; that is, the print-out directions are followed and made as clear as possible. On the other hand, she insists that the dancers make use of the available freedom inherent in the materials. In most instances, no directions are given for the use of the arms, head, and face. This freedom offers an innumerable array of choices, and allows the individual dancer to shape the dance to her own technical capacity. Perhaps even more significant is the fact that Beaman purposefully designed the computer generated dances so that the intensity and quality of the movements to be performed are left entirely to the performer's judgment. Therefore, the performance of the print-out becomes a part of the dancer's personal statement. For example, the print-out may read:

> Raise right arm only forward 8 slow beats. That could be done by holding the arm rigidly out straight in front, moving it by tiny staccato jerks forward for the 8

> counts . . . . or one could be relaxed and slowly in legato fashion move the arm forward. (78:4)

Therefore, since intensity is a major dimension for determining the meaning of a dance, the quality of the intensity or force of movement is left to the aesthetic discretion of the individual dancer.

Key Choreographic Characteristics

Beaman's key choreographic characteristic was the searching for the "soul" of the dance and making it tangible in the performance. Her major intent was to make a direct sentient communication.

Choreographic statement. Is an open-ended one. The choreographer-dancer intuitively interprets the print-out score. The way in which the choreographer-dancer handles the space, time, and force, and how he chooses to resolve and join together each line, ultimately determines the meaning given to the dance. (78)

Organic continuity. Is established in the opening four or five computer print-out lines of a dance. That is to say, the opening lines establish the "mood-style" and become the building blocks for the dance.

Primary qualities. Are available and are determined by the computer print-out and the dancer-choreographer. The qualities could be controlled to a certain degree. For example, a dance could be programmed with all fast or all slow durations over four beats.

Titles. Are both specific and abstract.

Continuous artistic experimentation. Is achieved by focusing the creative energies on self-discovery and on new areas of explorations.

Random indeterminacy. Becomes determinate when the choreographer-dancer makes a conscious decision to accept or reject what chances forth. At this point chance becomes choice.

Sound. May be established by an electronic metronome reading, handclapping, vocal noises, or audible counting.

Tempo and dynamics. Are determined by the performer.

Time. Is left to the discretion of the individual dancer. For example, the dancer performs the print-out movement directions in terms of a given pulse of slow, medium, or fast.

Chronology of Innovative Techniques

Although Beaman admits that her pioneering ventures are clearly only a beginning, her concert works are indicative of the new forms that have evolved.

First Computer Dance (1964). Included a print-out of random dances for soloists.

Second Computer Dance (1965). Provided stage grid controls for the area of the stage where the action was to take place.

Third Computer Dance (1966). Limited the random choices and provided more control. The print-out provided dances for any number of performers. The grid allowed the choreographer to control the direction of the movement on the stage. Hence, titles of dances such as Once Off Stay Off, Cluster at the Center, and Right to Left, were indicative of the movement direction of the dance.

STATIONARY DANCE (1968). Was choreographed and filmed for showing at the Cybernetic Serendipity exhibition in London. Dancers were costumed

in black and white leotards and tights to achieve maximum contrast. Both dancers were photographed as they danced against the opposite color. The dance was accompanied by an electric metronome.

The second performance of STATIONARY DANCE was presented live in Pittsburgh. The dancers were dressed in soft hues. Performing in the spatial restriction designated by the computer print-out, a strong emotional tone of frustration of one dancer attempting to reach the other was created.

In the third performance of STATIONARY DANCE, Beaman danced half of the duet as a solo on a five by six foot platform two feet high to further emphasize the direction, indicating stationary. The light design was a significant element: a green spot hit the dancer from the footlight position, creating great shadows on the cyclorama. A second side spot was placed where the other dancer would have been. Hence, the effect of the light design doubled and magnified the solo action. An emotional expressionistic effect resulted.

Ondine (1970). Was a solo structured in an ABA form and danced by Beaman. The B part of the structure was computer directed.

Cluster at the Center (1972). Was a group dance that was produced in collaboration with John Paskiewcz, who was developing inflatable plastic structures held in shape by low air pressure. The dance centered around a huge round dome-like plastic shape. An amplified metronome and one of Messiaen's Seven Haikai were used for the music. The dancers, costumed in brilliantly colored leotards and tights, created a blurred motion under the dome, and each flashed a small light in time with the metronome pulse. A total blackout of the lights allowed

the dancers to escape from the dome as it deflated. The dances were of different lengths in time, which prevented all of the dancers from stopping at the same time. However, it could have been programmed to hold the duration steady.

Three computer generated dances, utilizing the architectural space, fountains, and reflecting pool at Cranbrook Academy in Bloomfield Hills, Michigan were performed in 1973:

Front to Back. Consisted of two dancers interpreting the same score; both moved only forward and backward in straight lines on the side of a reflecting pool.

Figure Eights. Was performed on three levels of steps leading down from the peristyle to the Mills fountains. The figure eight design forced the dancers to move through the entire space; the stairs became synonymous with the dividing lines of the print-out grid. Hence, the "stage" challenged the ingenuity of the dancers, especially when some of the print-out instruction transfers occurred on lines which required the dancer to remain on the floor.

Trio. Was a solo random print-out dance with no grid; it was performed simultaneously by three dancers. One of the guest speakers, never having seen the dance, was asked to select and play a tape of computer music to accompany the dance. Thus, the dancers heard the music for the first time as they performed the indoor work. (78)

Glossary of Beaman's Terminology

Algorithm. The procedure used in preparing the program for the computer. Basically, an algorithm is a step-by-step procedure that leads

to a solution of a given problem. In the case of a computer generated dance, the problem to be solved is breaking down the dance material into its smallest units (a movement, a duration, and a space), which can then be numerically coded and described in some program language. For example, the algorithms used in Beaman's computer generated dances consisted of defining a dance as a sequence of steps, each step of which consisted of a duration, a movement, and a spacing.

Category. A classification such as a movement category, a space category, a duration category.

Chance as methodology. See Cunningham glossary.

Chance relationships. Those relationships which may occur within a given dance solely by chance. For example, certain structural parts of a given dance may or may not simultaneously parallel the structural design of the music used. In other words, the parallel may have occurred by chance.

Clarity. Is achieved by requiring that each dancer perform the computer print-out score (lines) exactly as they are generated by the computer.

Computer generated choreography. A non-objective approach to choreography. Essentially, this involves describing the algorithms and programs developed to produce computer generated dances. Once defined, described, and written in the form of a program, the programmed material is fed into the computer. The computer arranges and manipulates the material according to the program instructions, producing the required number of dance sentences (lines). The resulting print-out

sheet contains the dance sentences (lines), which is the dance score to be performed by the dancer(s).

Computer print-out. The printed directions, usually in a sentence form, which are constructed objectively by the computer. The print-out becomes the dance score to be performed by the dancers. The quality and/or intensity of the movement sentences is not given on the print-out; rather, it is left to the discretion of the individual dancer.

Computer program coding. A method of numerically coding computer program materials, by which numbers are assigned to specific movements, directions, or anything else requiring such coding. The computer can then arrange these items, or manipulate them in numerous combinations, as instructed.

Dance training. May result in programming the whole thinking-acting process of the dancer. Such programming may produce recognizable styles. Computer generated choreography may help the dancer-choreographer, mired in personal movement ruts, to break out of his mold.

Impossible print-out combinations. Those directions given on the computer print-out which may seem impossible to perform. For example, the dancer is required to remain on the floor for one or more sentences (lines) after the initial line directing him to fall. The next line may randomly select another fall. The problem to be solved would be how to fall again after one has already fallen.

Intensity. The major dimension of dance which the computer generated choreography leaves entirely up to the performer's judgement. Therefore, the major factor in determining the meaning of a dance is left to the discretion of the individual dancer.

Line. A dance step (a sequence of steps) constructed when the computer is instructed to pick randomly a movement phrase from each of the three categories (a movement, a duration, and a spacing), putting them together, thereby generating a dance sentence. The computer prints these sentences (lines) on a print-out sheet. Depending upon the program instructions, the print-out sheet may contain any number of such sentences (lines), which are to be performed by the dancer.

Meaning. Evolves from the way in which the dancer-choreographer handles the dance elements of space, time, and force, and how each line is joined together.

Nodes. The designated eighteen stage areas which determine the location and the control of stage movement.

PENELOPE. A method of programming language oriented applications in non-numeric program. It results in sentences written in English on the computer print-out sheet.

Permutation. A possible arrangement of material. One can have a group of material in which position or the relation of the parts is important. For example, abc is one arrangement (combinations might be abc, bca, cab); every time the order is changed, new permutations are created. Hence, the order of sections of materials.

Phrase. A computer generated sentence written in the English language by the computer.

Print-out. A piece of paper which comes out of the computer with material printed on it. In PENELOPE, it is a sentence in English. The directions produced in sentence form by the computer; the dance score to be performed by the dancer.

Program. An algorithm expressed in some programmed language. It is a process whereby the computer is supplied with the materials and instructions needed to complete a given task.

Randomness. The chance arrangement of dance movement phrases, sections, or individual isolated movements randomly selected and developed, and resulting in different permutations on the computer print-out. The computer can be instructed to select material in a random way as well as in a systematic way.

Random indeterminacy. The indeterminate elements of a dance. The dancer-choreographer makes the final decision to perform or forget. At this point, the chance element becomes determinate.

Shapes. The path or direction either on the floor, or body action design in space.

CHAPTER IV

SCRIPTS

The following scripts are designed to identify, clarify, and analyze three current non-objective choreographic techniques: Nikolais' multimedia, Cunningham's chance/indeterminacy, and Beaman's computer dance. The scripts may serve as supplementary aids for viewing three available 16 millimeter films selected for analysis: FUSION (Nikolais), RAINFOREST (Cunningham), and STATIONARY DANCE (Beaman).

Given the idea that the scripts may provide choreography and/or dance appreciation courses the needed constructs for a pedagogical synthesis, the contents of the scripts were structured to provide a flexible approach to the presentation of the material.

INTRODUCTION

In order to make the scripts practical in content and organization, each script was structured in two parts, using the following format:

Part I. Supplementary Preparation Materials for the Instructor

A. Suggested Guidelines for Use of the Scripts
B. The choreographer's general choreographic techniques for composing a dance
C. The choreographer's key choreographic characteristics

Part II. Video-Audio Analysis to Accompany Showing of Film

A. Brief introduction to nature and background of the choreographer
B. General analysis of the film
C. Specific analysis of approximately the first 50 seconds of the film
D. General Checklist of Characteristics and Discussion Questions

SUGGESTED GUIDELINES FOR USE OF THE SCRIPTS

The suggested guidelines are purposefully general in nature so as to provide a flexible procedure for presenting the material. In this way the script content may be adapted for use by the instructor depending upon the group, the situation, and the films available.

Professionally made films can be used to bring concert works of current modern dance into the classroom. To make effective use of the 16 millimeter films, the instructor should obtain a copy or an outline of the script well before the initial showing of the film. He should then secure all related materials, such as books and periodicals, pertaining to the specific choreographic technique. It is very important that the instructor know the nature of the contents so that she may prepare herself and her students for the viewing and analysis of the filmed dance.

The specific preparation and discussion should arouse student curiosity and interest, as well as relate important points to observe and remember as they view the film. To facilitate this, the instructor may wish to use the checklist of characteristics and discussion questions which may be found at the end of the script. The script describes several specific things to look for while viewing the film, such as

the ending of sections and phrases, and the students are asked to identify these when they see them. Since it is possible that the students may be unable to identify the material, with the film running past that point, the instructor should stop the film, rewind it to an appropriate point, and run the film again. Running the film again over the same spot will help the students to recognize what has been missed, and will reinforce the learning experience. If notes are to be taken during the showing of the film students should be supplied with materials beforehand, and encouraged to make only brief notes in order to avoid missing important parts of the film. They should be allowed to complete their note-taking immediately after the film has been shown while the information is still fresh in their minds.

During the discussion period following the showing of the film, the instructor should clear up any misunderstandings. Each important point should be discussed and summarized.

I. SCRIPT FOR MULTIMEDIA: FUSION, BY ALWIN NIKOLAIS

Supplementary Preparation Materials for Instructor

Nikolais' multimedia/total theatre creates an illusion by the synthesis of sound, shape, color, light, properties, and motion. Each element has its own time-space existence which adds substance to the total theatre event. By dissociating dance from its literal ideas and gestural connotations, motion is used as a metaphor; that is, as a purely abstract substance of dance. His language consists of motional qualities such as light, heavy, thick, soft, hard, etc., which indicate the manner in which the action occurs.

Nikolais' general choreographic techniques for composing a dance.

1. Nikolais' approach to choreography is open and instinctive. The germinal idea for a new work is reflected upon for some time before the actual work is begun.

2. When developing a work, a certain pathway or itinerary of thought is established in which expected results and visions occur. The objective is to give the audience an experience that is beautiful, coherent, and open-ended.

3. The most minute details of each movement are choreographed with precisional care. Kinetic and sensory perceptions which will be communicated through motion are achieved by "motional legibility." That is, the movements are carefully selected, worked and reworked until they bear the final motional image of the dance.

4. A gestalt is achieved by putting a series of events in an order related to the specific intent of the choreographer so that they will come together as a unified whole.

5. Other elements such as light, color, sound, properties, and decor are precisionally fused and choreographed to produce a seamless whole.

6. Continuity is achieved from the initial opening motions. These opening motions become the structural foundation for the remainder of the dance. Therefore, a special continuity and total unity are achieved by creating a relationship between the new and recurring motions.

7. A blank recording tape is used to record cues for mood, tempo, or action changes of each section of a work after it has been choreographed

and assembled. From the recorded tape, the score is then composed on the electronic synthesizer. Thus, the choreographed sound enhances and reinforces the continuity and total unity.

8. Since the dances are devoid of conveying a character or story line development, the dancer's attention is focused on the energy of the motion itself; the structure of the dance becomes a pathway or external itinerary mapped out by the choreographer. Each dancer brings his vision of what the dance is by transcending himself to create an illusion.

9. Phrasing is built according to motor logic. Time and silence are sensed as patterns of released energy in accordance with the total environment. Trained to move in relation to space volume, the dancer articulates complex patterns of unusual postures, movements, body isolations, and groupings which organically unfold, emerge, and occur in unified spatial designs.

10. Properties are an integral part of the choreographic patterns. As the dancer extends his action beyond the physical limits of his body, with the use of "props," his ultimate aim is to kinetically and intuitively fuse the contents of the total, dynamic environment.

11. Light and color are "choreographed" to fuse, interact, and create visual illusions using the dance motion. For example, with the use of light and color, dimensions of time and space can be changed, figures can be distorted, the dancer's shape can be made to appear transformed without motional change, and dancers can appear to have transported themselves without a time/space existence.

Nikolais' key choreographic characteristics. Nikolais contends that all the elements of his multimedia/total theatre are fused to have equal value. The materials of motion, shape, space, time, color, light, and sound are structured and expressed in an abstract metaphoric language which will communicate directly to the senses. The key choreographic characteristics contained in Nikolais' works include the following:

1. Organic continuity is derived from the opening motions of a work. Each motion develops out of the preceding motion.

2. Primary qualities include motional textures of light-heavy, thick-thin, soft-hard, etc.

3. Total theatre concept perceives sculpture as shape, music as sound, painting as color, dance as motion, and theatre as dynamics. Each is designed or choreographed so no one element is more important than the other in one theatre piece.

4. Motional metaphors are achieved by structuring an isolated mode of action (through the use of textures of light-heavy, thick-thin, etc.) from its original meanings. The direct relationship to its former time, location, event, or relevancy to a particular object is transcended.

5. Illusions of time, space, and motion are created.

6. Time is used in terms of duration of motion or stillness; that is, the relative duration of movement, rhythm, accent, and pauses. Time is considered to be more important than meter.

7. Sound is achieved by electronic or music concrete scores which have been composed in relation to the dancer's organic motor logic phrasing.

8. Properties have equal value with the other elements. They are choreographically an integral part of the dynamic environment, and are used as extensions of the dancer's motion.

9. Costumes are used to depersonalize the dancer, as a conveyor of connotations, and to extend or change the line or shape of the dancer's body.

10. Structured light is decentralized and choreographed from any angle or level to distort, compress, or alter the perception of shape, motion, time, and space.

11. Titles are abstracted to prevent literal interpretations, bias, or preconceptions about a work.

12. Depersonalization is related to the non-objective or non-literal intent of the choreographer's approach. The direct kinetic involvement of the dancer is impersonal and connotative. Nikolais has been accused of dehumanization. However, his work as an artist and as a teacher is characterized by humanism.

General and Specific Analysis to Accompany Showing of FUSION

It is suggested that the instructor be thoroughly familiar with both the general and specific analyses of the script and the film so as to facilitate a more meaningful learning experience for the students. The introduction to Alwin Nikolais and the general analysis of FUSION are designed to be used by the instructor in preparation for the showing of the film. For example, the introduction and the general analysis may be read and/or discussed with the class prior to the showing of the film. The audio is the commentary to be spoken as the film is shown, and

consists of the specific analysis of approximately the first fifty seconds of FUSION. The video portion of the script includes how and when to operate the film, illustrations of "still" frames related to the audio commentary portions of the script at given points, and the approximate length of time in minutes and seconds which the film must be run to identify the material covered in the script.

Introduction: Alwin Nikolais. Alwin Nikolais' prolific imagination has created one of the most unique total dance theatres of the twentieth century. Spending almost a lifetime developing and perfecting a total dance theatre, he was able to bring to the viewer and the art form itself a step further along the evolution of man's awareness of life and its meaning.

Total theatre is an attempt to create a new synthesis of art and modern technology. It offers a fusion of sound, shape, color, light, properties, and motion--each having its own time-space existence which adds substance to the total theatre event.

Nikolais studied with Truda Kaschmann, a Wigman-trained dancer, Doris Humphrey and Charles Weidman, Martha Graham, and Hanya Holm. Nikolais' theory and philosophy of the dance appears to have been inspired by the German dance. His philosophy regarding total theatre and the ordering and attention given to space as a key element of dance seems to parallel the philosophy of Mary Wigman and Hanya Holm.

Nikolais' choreographic works are non-objective; that is, they are created without conscious emotional or literal connotations. Concerned with movement for its own sake, he believes that the basis

of dance is motion. Motion is sensed by the viewer, not told. Nikolais dissociated dance from its literal ideas such as gestures which are like pantomime. His language consists of qualities of motion, such as light-heavy, thick-thin, and soft-hard.

Nikolais' non-objective approach to choreography is an open and instructive one. Each element of the total theatre such as light, color, motion, sound, "props," and shape, has a vital and equal part in creating a unified whole. Within the total theatre, created by the dance, Nikolais perceives sculpture as shape, music as sound, painting as color, dance as motion, and theatre as dynamics. Dynamics is the range and sensation of energy in action which can be an illusion.

General analysis of FUSION. FUSION is a suite of dances structured primarily into four sections.

Section one consists of a playful interaction of dancers who are partially viewed through various open rectangular slots.

Section two, which is different from section one, begins with a trio of dancers dressed in different costumes. The trio, while maintaining constant physical contact with each other, moves in a slow, sustained manner around their own axis. The performance creates a series of sculptural shapes. Their sculptural designs slowly recede into the background as superimposed (overlapped) cylindrical, rectangular, and round shapes emerge. The shape of the various "props" alternately blend and fuse from slowly floating shapes into violently whirling shapes. Some of the "props" float and blend, while others whirl violently, jab, and pierce the space. This is the longest

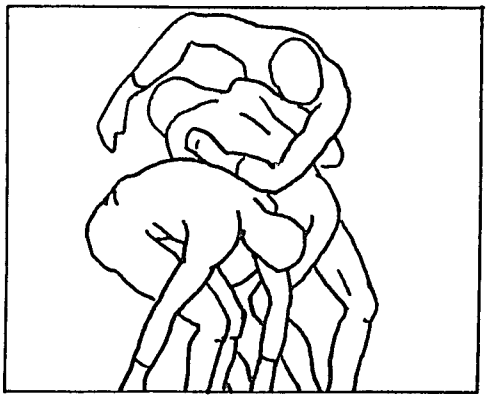
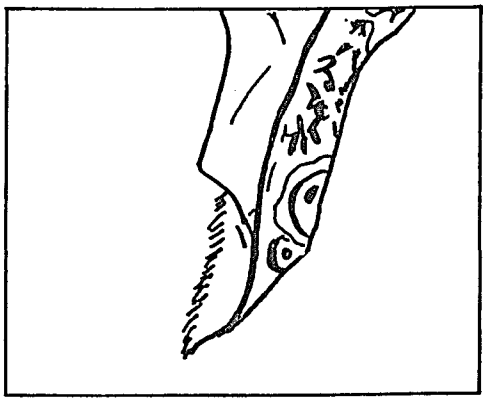
section of the dance, being approximately six and one-half minutes in duration.

Section three is introduced by the slow, sustained movement of a floral designed towel floating in space by itself. Other slowly moving towels of various designs enter and float sculpturally in space. The towels are juxtaposed by superimpositions of dancers manipulating huge spear-like props which pierce and jab into spatial designs. Then the spear-like props become the petals of a floral design. The dancers and floral designs on towels alternately and rhythmically dominate the entire picture frame until the dancers become an integral part of the towel design. The motion, props, and juxtapositions of a variety of towel designs are totally fused at the end of Section three.

Section four begins with a solo dancer costumed in towels of brilliantly colored designs. The entire section rhythmically alternates close-ups of towels of various designs with close-ups of different designs/shapes of the dancers. The overall effect is one of juxtapositions, superimpositions, and total fusion of all the material.

Specific analysis of approximately the first fifty seconds of FUSION.

VIDEO	AUDIO
Film ready.	Instructions: Read or discuss with the class the introduction to Nikolais. Have class review the general checklist of characteristics and discussion questions on pages 106-108. Instruct the class to be aware of the endings and beginnings of the various sections of the dance.
Show film in its entirety.	
Stop film. Rewind film to beginning.	Comment: As we rewind the film to the beginning, be thinking about the number of sections of the dance. Study your checklist of characteristics to look for in FUSION. How many did you see? Question: Can you identify the end of Section one? Call out "end of section" when you think you see it.
Run film for two minutes and forty-seven seconds.	

VIDEO	AUDIO
Stop film on this frame:	Comment: Yes, that is correct. Section one ends with the introduction of three dancers who are dressed in different costumes. Making physical contact with each other, they are making designs with their bodies.
 Figure 2 End of Section One	Comment: Now, while we continue running the film try to identify the end of Section two. Call out "end of section" when you think you see it.
Continue running film for three minutes and fifty-two seconds.	
Stop film on this frame:	Comment: Correct! Section two ends with one towel of floral design slowly floating across the screen.
 Figure 3 End of Section Two	Comment: Now see if you can identify the end of Section three. Call out as before when you think you see it.

VIDEO	AUDIO
Continue running film for five minutes and twenty-three seconds.	
Stop film on this frame:	Comment: Very good! The end of Section three begins where the dancers make the last tight circular formation within the larger superimposed abstract circular design.

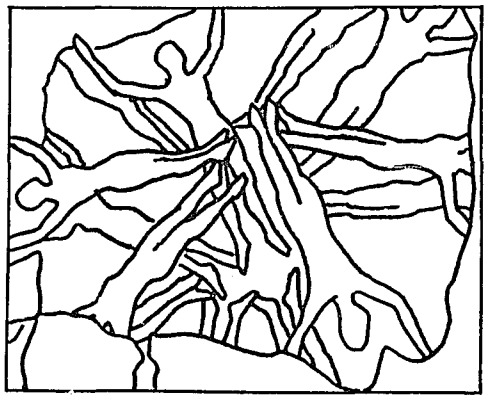


Figure 4

End of Section Three

Continue running film for approximately one second.	Comment: Now, identify the beginning of Section four, which is the last one.

VIDEO	AUDIO
Stop film on this frame:	Comment: Correct! The last section begins with the close-up of a single stationary dancer costumed in towels of brightly colored designs.
	Comment: Now, let's view the remainder of Section four, which ends the film.
Figure 5 Beginning of Section Four	
Continue running film to the end, approximately one minute and fifty seconds.	
Rewind film to beginning of dance.	Instructions: Allow the class to discuss the materials contained in the various sections. Define a transition as a bridge between movement; and briefly discuss some of the transitions which appeared to connect the sections. Define a phrase as being analogous to a sentence. A phrase may be considered as a sequence or series of

VIDEO	AUDIO
	organized, related movements which give a sense of unity. It may have a single length and speed, or it may contain several combined speeds. The length or speed of a phrase is usually developed around the contour or shape of the movement to be developed; that is, phrases are built according to motor logic.
Film ready.	Question: Can you identify the ending of the first phrase? Watch carefully, and when you see the end of the first phrase, call out "phrase."
Run film for twenty-four seconds.	

VIDEO	AUDIO
Stop film on this frame:	Comment: Very good. The first phrase ends when both dancers move into a crouching position after the last unison jump. This phrase may be counted as six measures in 4/4 meter.

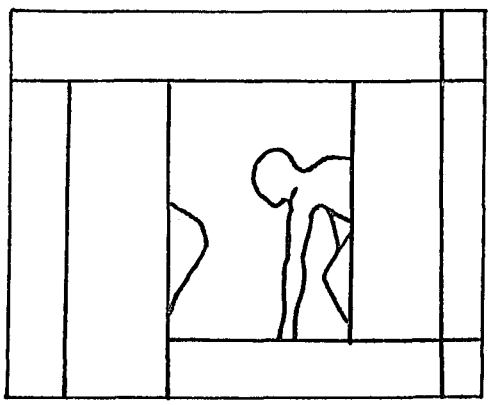
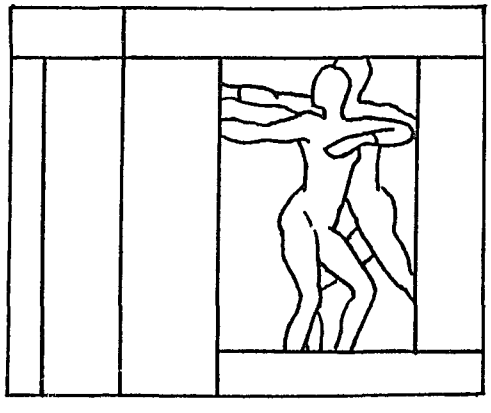


Figure 6

End of Phrase One

Rewind film to beginning of dance, while continuing to discuss points about phrases.	Comment: The first phrase ended with a momentary pause or stillness. The motion of the phrase appeared to be developed according to the dancer's motor logic. This is one reason why the dancers executed the phrase in an effortless and apparently spontaneous manner.
Film ready.	Now, let's see if the entire class can see both the first and second phrases. Remember that a phrase

VIDEO	AUDIO
	can be any length or speed, and it can consist of any number of separate motions. Perhaps the most important characteristic is that it has a sense of completion about it. As before, when you see the end of a phrase, call out "phrase."
Run film for thirty-two seconds. Stop film on this frame:	Comment: Yes, that's correct. The second phrase, like the first, also consists of six measures in 4/4 meter, and ends when both dancers come to a momentary stop, with each extending one arm sideward (stage right) into space. Then both focus the upper part of the body stage right and extend an arm in the same direction.
 Figure 7 End of Phrase Two	
Rewind film to beginning of dance, while continuing the commentary.	Comment: Now, let's rewind the film once again to the beginning and view that part of the dance performed in the first rectangular

VIDEO	AUDIO
	slot seen on the film. Look carefully to see if any of the material is repeated. Call out "repeat" when you see a movement, action, phrase, or part of a phrase repeated.
Film ready.	
Run film for thirty-seven seconds.	
Stop film on this frame:	Comment: You're correct. Now you're really catching on. The second phrase contains contrasting but related material. However, as seen here, the third phrase is almost an exact repetition of the first phrase. So, in general terms, we may say that the materials of the first, second, and third phrases performed behind the first rectangular opening were unified by creating a relationship between the new and recurring motions. Nikolais' organic continuity is derived from the opening motions of a work.

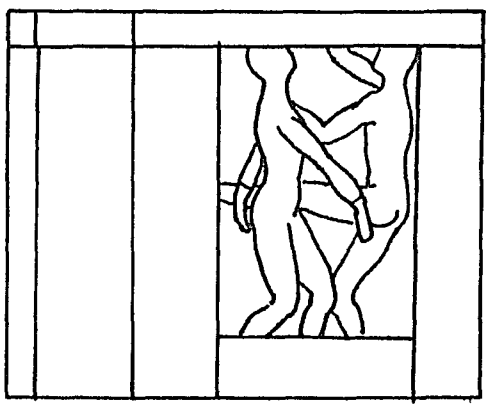


Figure 8

First Repetition

VIDEO

AUDIO

These opening motions become the building blocks for structuring the rest of the dance. As you watch the dance performed in the second rectangular opening, see if any of the movement material presented in the first rectangular opening is repeated. Be on your toes, and again call out "repeat" when you see one.

Continue running film for <u>one minute and twenty-three seconds</u>.

Stop film on this frame:

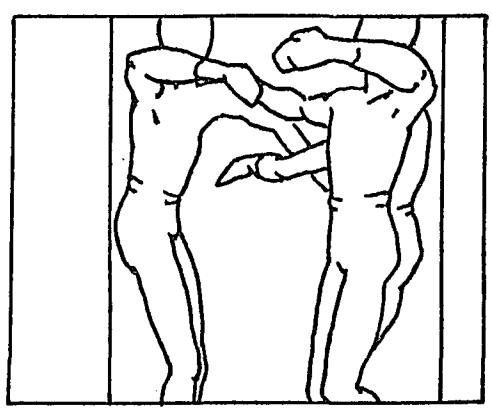


Figure 9

Repetition/Manipulation

<u>Comment</u>: Yes, here in the third rectangular opening we have a trio of dancers. The male dancer simultaneously extends a hand to each of the two opposite dancers, and they walk past each other. This is not an exact repetition of the movement gesture made in the first phrase performed in the first rectangular opening, but it is a good example of a manipulation of that movement.

VIDEO	AUDIO
	Now watch for further repetitions and/or manipulations as we progress into the rest of Section one.
Continue running film for thirty-four seconds.	
Stop film on this frame:	Comment: Yes, that's correct. Look at this spatial design made by the two dancers. The male dancer, standing in a bent-knee stride position (second position plié), is holding the female dancer over his right leg. The female dancer has both arms outstretched to stage right. Remember your stage directions are always referred to as the dancer's right and left. Both dancers have focused their movements to stage right. Does this particular spatial design look familiar? Yes, a very similar spatial design was stated in the last part of the second phrase of the dance. Let's go back to phrase two and find it.

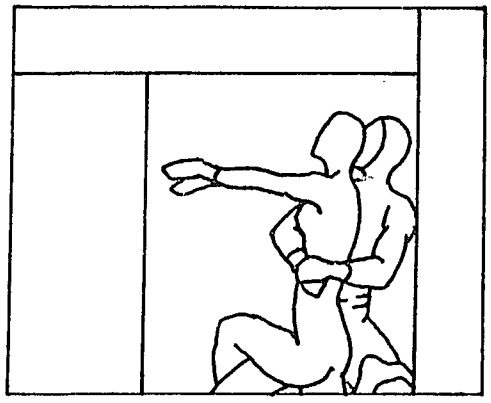


Figure 10

Repetition/Manipulation

VIDEO	AUDIO
Rewind film to beginning and run for thirty-two seconds.	
Stop film on the same frame as illustrated in Figure 7.	Comment: Yes, here it is with minor manipulations. The only difference is that here in the first design each dancer has one arm extended to stage right, whereas in the second design the female dancer has both arms extended to stage right, while the male dancer in second position plié has both arms around the waist of the female.
Rewind film to beginning of dance while continuing the commentary. Instruct students to review the checklist on pages 106-108 during this time.	This was our last stop. While the film is being rewound to the beginning, carefully review the general checklist of characteristics and discussion questions related to Nikolais' FUSION. (See pages 106-108 for this checklist.) Then we will view the dance in its entirety once more.
Film ready.	
Show film in its entirety.	

VIDEO	AUDIO
	Instructions: Follow up the final showing of the film with a discussion of the general checklist of characteristics and questions related to Nikolais' FUSION.

General Checklist of Characteristics and Discussion Questions Related to Nikolais' FUSION.

A. General Characteristics

1. There is a fusion of sound, shape, color, light, properties, and motion. There is no character or story line development.
2. Motion is the illusion created by movement. Phrasing is built according to motor logic.
3. The most minute detail of each image is precisionally choreographed.
4. From the beginning movement to the end of the dance, the ordering of the series of events comes together as an unified whole. That is, the seamless whole is so precisionally created that it is difficult to tell where one medium stops and another begins.
5. The initial opening motions become the structural foundation for the remainder of the dance.
6. A special continuity and total unity is achieved by creating a relationship between the new and recurring motions.
7. "Choreographed" sound enhances and reinforces the continuity between new and recurring motions.
8. No specific dancer is singled out as the hero or center of attention. The dancer's energies are focused on the energy of motion itself.
9. Time and silence are sensed as patterns of energy.

10. Props are manipulated and fused into the choreographic patterns.
11. The dancers move in relation to space volume.
12. The dancers articulate complex patterns of unusual postures, movements, body isolations, and groupings, as they organically unfold, emerge, and occur in unified spatial designs.
13. To a great extent, the interaction of dance motion with other total theatre elements is established through the use of light and color.
14. Light and color distort and create illusions of time and space; the emphasis is given to the sculptural form of the human body.
15. The various speeds and inversions of the film and sound, the zooming in and out of the camera focus, and the juxtapositions and superimpositions of towel designs, lights, and props, create both a fusion and a fragmentation of time, space, and motion.

B. Discussion Questions

1. Did one element, such as light, color, and shapes, seem more important than another? If so, where?
2. What is your favorite spot in the dance? Why?
3. Did you see any superimposing? Where?
4. What was the relationship of the floral and cubistic designs of the towels to the shapes and designs made by the dancers?

5. Was the suite of dances developed to come together as a coherent whole?
6. What do you think would happen to the continuity of the dance if a section were omitted?
7. Would the dance be the same if the sections were organized in a different sequential order?
8. Identify the section of the dance where only parts of the dancer's body were visible.
9. Section one was viewed through various rectangular openings. Did these rectangular openings relate to the designs that were created in the rest of the dance?
10. Think of some ways in which Nikolais' FUSION differs from José Limon's MOOR'S PAVANE.

End of Script: FUSION, by Alwin Nikolais.

II. SCRIPT FOR CHANCE/INDETERMINACY: RAINFOREST, BY MERCE CUNNINGHAM

Supplementary Preparation Materials for Instructor

Cunningham has never ceased to alter his choreographic approaches whenever it suited him. Chance/indeterminacy procedures unlocked his imagination and served as a source of inspiration and freedom to artists associated with him. Currently, he has established a kind of anarchy where people can work freely together in collaborative artistic endeavors. The uniqueness of his non-objective dance is being discovered anew by each performance of his works.

Cunningham's general choreographic techniques for composing a dance.

1. Since music is treated as distinct and completely independent from the dance, Cunningham and the collaborating musical composer agree upon an arbitrary time length for which the dance and the sound will independently but simultaneously occur.

2. A time structure is then designed in exacting units of time in which the dance will occur. Any number of equal or unequal sections can be made within the total time structure. Long total times are usually structured into combinations of long and short parts. A fixed time, where speeding up or slowing down a particular movement or phrase, is sometimes adhered to as a part of a dance, or even a total dance.

3. A chance structure is set down in a definite form. Charts are made for different elements of the dance. Such elements may include the tempo, direction, type of locomotion, solo, and group movement. Coins are then tossed to determine the order in which the elements go

together. Hence, charts are made and coins tossed to determine the number of dancers, their spacing, tempo, frequency of movements, sequences, order of solos, duets, trios, movement phrases, isolated body parts, or any other element Cunningham wishes to order by chance.

4. A dance not set down in a definitive form has an indeterminate structure. Although the material for a dance is fully choreographed, set, and rehearsed at length, it is rearrangeable. For example, major sections can be rearranged each time the dance is performed. On rare occasions the dancer is given the option of spontaneously choosing what material to perform, with whom to perform it, where on the stage and for how long, or the choice of performing none of the material.

5. Whether chance or indeterminate methods are used, Cunningham works alone to find the raw material. Movement phrases originate in, come out of, and go into stillness. Group sections, developed phrase by phrase, are sketched first; that is, in unison movement phrases or sections. Taught by repeated demonstrations and in silence, the complexity is increased by varying the material, rhythm, or space for individual dancers.

6. Omitting discussions about images, qualities, etc. Cunningham carefully gives each dancer the steps and bodily movements which he has worked out in advance.

7. The dancers are individually responsible for working out spacing and/or timing difficulties with each other. Each dancer, in his own time and space, must kinesthetically experience the dance.

8. Since it is the dancer, and not the music, who creates the temporal structure, rhythm comes from within the dancer. That is, the

rhythm comes out of the nature of the movement phrases, and from the dancer's own musculature.

9. Newly choreographed movement and phrases are repeatedly rehearsed and timed by a stopwatch until they find their own "inevitable" time in the designated space. After months of rehearsing, the time of each part and the time between the parts are sensed. The performance is executed by time sensed, event sensed, and by the muscle memory of the dancer's body. The dancers must rely upon their interior time and their remembered relationships to one another and space.

10. Chance/indeterminacy methods produce a fragmentation (breaking up) of movement which projects dynamics of changing qualities. For example, four solos performed simultaneously can be densely overlapped at one moment, and sparsely separated the next moment.

11. The created space is related to dynamics of the dancer's movement. Defocusing (no central point of attention, such as stage center) and equality of space (no place on stage is more important than any other) result in a multi-directional, multi-facing point of view which essentially makes each dancer a soloist. Regardless of <u>where</u> the dancer dances, that area is center for him at that moment.

12. Coherence is achieved by <u>how</u> the dance is performed. Even though the continuity/coherence of parts of a dance may be deliberately broken up, the resulting discontinuous abstraction (broken or intermittent movement without conscious emotional or literal connotations) is performed with a perfect kinesthetic continuity that makes everything look right. The dancer's impersonal concentration on the material helps to make this possible.

13. Counterpoint (the simultaneous combination of two or more movement themes or phrases) and a sense of immediacy are achieved as a result of the independent and spontaneous movement of the individual dancer. For example, each dancer may be free to choose spontaneously what parts and in what order he wishes to perform the parts. Through this process a counterpoint may be achieved by the correspondencies of the choreographed material, and by each dancer's simultaneous execution and presentation of the material.

14. The independent elements, such as light, sound, props, and decor, are treated with the same autonomy and freedom as the dance movement material. Often these elements are brought together for the first time in the last stages of creating a work.

15. Given the idea that the indeterminate structure is discovered anew at each performance, a dance, like Calder's mobiles, may exhibit different qualities from one viewing to the next. Therefore, the dance is concerned with the single instant as it occurs within the fleeting moment. It is also viewed as a visible action of life whose intent is to wake up the life being lived.

Cunningham's key choreographic characteristics. Cunningham's choreographic works are designed to "say" nothing. His primary concern is human activity. Firmly committed to energy expressed through the body moving (or still) in time and space, he is interested in movement for its own sake. The key choreographic characteristics contained in Cunningham's works include the following:

1. Action as duration is treated as a measure of distance from one point in space to another; that is, the time spent in covering this distance. Metric ordering is replaced by the stopwatch.

2. Stillness can be both inner and outer. Immobility of stillness is used for contrast and definition of movement. Stillness serves to heighten action. Thus, movement may become more clear if the space and time around the moving are of its opposites.

3. Symbolic dissociation means that movement is removed from literal meaning. Movement in a Cunningham dance is the meaning.

4. Chance/indeterminacy are two of the methods of ordering the individual performer's movement-stillness scores.

5. Personal rhythm of the performer comes out of the nature of the movement itself and the nature of the individual dancer.

6. Tempo and dynamics are determined by the performer.

7. Contrasting relationships appear to be illogical and out of order at times. Contrasting relationships are created when the juxtapositions (two or more elements placed close together for contrast) of movement, sound, light, and decor, create a discontinuous abstraction and immediacy.

8. Independence of dance and music allows the two to coexist in time; that is, dance and music are treated as separate entities with determinate time. They are related simply because they exist at the same time. (Part of the philosophy of composer John Cage and Merce Cunningham embraces the belief that things existing or occurring at the same time are related; hence there is unity between them.)

9. Sound is either live or taped for Cunningham's works. Compositions are not structured to parallel the dance, except in time.

10. Stage decor, light design, and costumes are often bizarre--for example, pointillistic design on leotards and tights, and newly created "prop" designs for each performance of the same dance.

General and Specific Analysis to Accompany Showing of RAINFOREST

It is suggested that the instructor be thoroughly familiar with both the general and specific analysis of the script and the film so as to facilitate a more meaningful learning experience for the students. The introduction to Merce Cunningham and the general analysis of RAINFOREST are designed to be used by the instructor in preparation for the showing of the film. For example, the introduction, the checklist, and the general analysis may be read and/or discussed with the class prior to the showing of the film. The audio is the commentary to be spoken as the film is shown, and consists of the specific analysis of approximately the first fifty seconds of RAINFOREST. The video portion of the script includes how and when to operate the film, illustrations of "still" frames related to the audio commentary portions of the script at given points, and the approximate length of time in minutes and seconds which the film must be run to identify the material covered in the script.

Introduction: Merce Cunningham. The theoretical basis for Cunningham's chance/indeterminacy approach to choreography is the belief in the basic equality and uniqueness of all things. Autonomy and freedom are extended

to each theatrical element--the movement, lights, sound, and decor. Through the use of chance/indeterminacy methods and independent time structures, Cunningham has created one of the most innovative, complex, and unique non-objective choreographic techniques.

Cunningham studied with Martha Graham, and was a featured soloist of the company from 1940 to 1945. It was during these formative years that he studied with and later taught at the George Balanchine School of American Ballet. He began presenting solos in 1944, with John Cage as his musical composer. Although his collaborations have included some of the finest contemporary artists of our time, it was the controversial, pre-avant-garde composer, John Cage, who clearly influenced Cunningham's innovative non-objective choreographic techniques.

Although Cunningham's works are purified of literal meaning, his dances are not meaningless; they can and do connote or evoke--they can be poetic. In essence, his choreography is based on the kinetic integrity of the body, not on heroes, emotions, or states of mind, but on individuals.

General analysis of RAINFOREST. RAINFOREST is one of Cunningham's longer and darker works. It seems to come from a source of movement energy that is dramatic. This dance appears to be more tightly choreographed than some of his newer dances such as Events. The nineteen minute time structure of RAINFOREST can be divided into two unequal sections. Section one is approximately eleven minutes long, and Section two is eight minutes long. Both sections are structured into combinations of exacting units of long and short parts of solos, duets, and trios.

Section one is designed of exacting units of time within which each of the solos, duets, and trios occurs. The entire eleven minutes of Section one consists primarily of alternating duets whose duration varies from three minutes and twenty-five seconds to seventeen seconds. Interspersed between the slow, sustained duets of crawling, sitting, leaning, and balancing, are the sudden, quick spurts of fast juxtapositions of brief duets and trios. Fragmented parts of the trios and duets appear to be brief solos performed simultaneously. Generally speaking, Section one consists predominantly of slow, tense duets choreographed in a low register or key with many still moments. Section one ends with two male dancers softly "rolling" the female dancer to stage right, and is concluded by the male dancer's slow, sustained, and intense solo.

Section two begins with a male/female duet. This section consists of three male/female duets whose duration ranges fron one minute and thirty-six seconds to two minutes and fifteen seconds, and two solos. Hence the sequential order is: two male/female duets, a female solo, a short one-minute male/female duet, and a one-minute solo by Cunningham, which ends the dance.

Whereas Section one is predominantly action of a low key or register, the motion of the dancers in Section two is characterized by lightness, clean delineations, tense concentration, thrusting and slow, sustained qualities, and nervous tension. The dancers move from a quiet center into unexpected and sudden spurts of furious, fast locomotor movements, stopping or changing directions on a pin-point. Individual complex counterpoint movement is accomplished as various

isolated body parts move simultaneously in different rhythms. The frenzied action, performed with rapid shifts of weight and direction, is packed with staccato changes of pace on the floor. The frenetic quality of action is performed with a delicate balance of natural grace and awkwardness.

Throughout the entire dance, the held positions (stillness) of the dancers have as much expressive power as the frenetic and almost spasmodic movement phrases. The dancers constantly keep the viewer in a state of anticipation by their incoherent and illogical movement phrases and the lack of preparation or visible attack of the initial phrases. A keen sense of immediacy and simultaneity is achieved by the individual dancers as they perform different material at the same time. Often the continuity of both movement and stillness phrases of classical grace are juxtaposed and broken up by sudden jerks or abrupt changes of illogical movement phrases. The resultant discontinuous abstraction occurs simultaneously and not according to a logical event coming as a response to another. The point to be made here is that throughout the dance the dancers are able to perform these complex and extremely difficult technical feats with a kinesthetic continuity that makes them look remarkably right.

Specific analysis of approximately the first fifty seconds of RAINFOREST.

VIDEO	AUDIO
Film ready.	Instructions: Read or discuss with the class the introduction to Cunningham. Have the class review the general checklist of characteristics and discussion questions on pages 127-128. Instruct the class to be aware of the ending of the various sections of the dance.
Show film in its entirety.	
Stop film. Rewind film to beginning.	Comment: As we rewind the film to the beginning, be thinking about the number of sections of the dance. Look at your General Checklist of Characteristics to Look for in RAINFOREST. How many did you see?
Film ready.	Question: Can you identify the end of Section one? Call out "end of section" when you think you see it.
Run film for approximately eleven minutes.	

VIDEO	AUDIO
Stop film on this frame:	Comment: Yes, that is correct. Section one ends with the completion of the slow, sustained solo performed by the male dancer. You are to be commended for being acutely aware of Cunningham's choreographic characteristics, and for your ability to apply your knowledge after seeing the film the second time. Now, see if you can identify the beginning of Section two. Call out "beginning of section" when you see it.

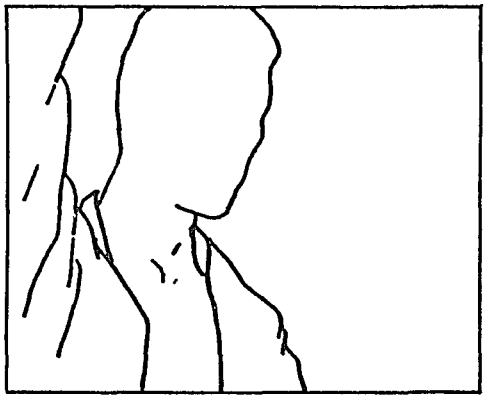
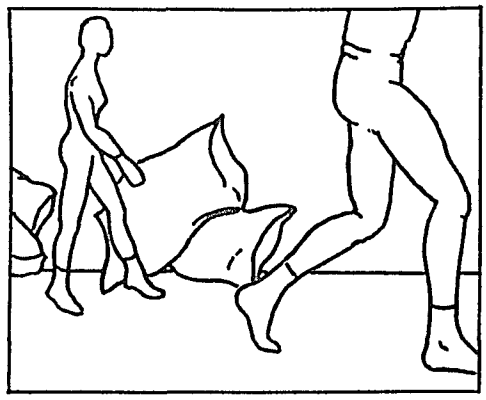
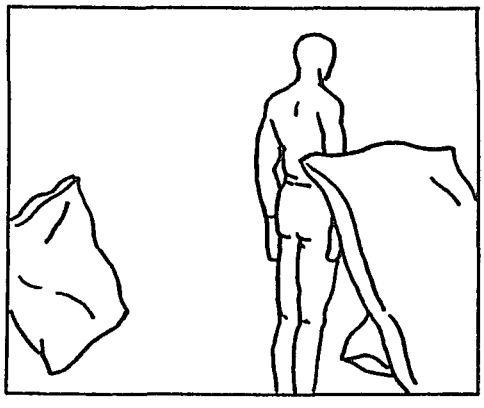



Figure 11 End of Section One	
Continue running film for ten seconds.	

VIDEO	AUDIO
Stop film on this frame:	Comment: Yes, Section two begins with the male and female duet. The new material presented within the ten seconds told us that it was the beginning of a new section.
 Figure 12 Beginning of Section Two	Comment: While we're rewinding the film to the beginning, think about how Cunningham uses stillness as deliberate spans of time, which he contends has as much expressive power as energetic movements. As we view the beginning of Section one again, be aware of the male dancer standing on stage left with his back to the audience. He holds this position for over three minutes while Cunningham and the female dancer perform a slow, sustained stationary duet. To what extent does the male dancer's stillness reinforce, clarify, or enhance the duet?
Rewind film to beginning.	
Film ready.	

VIDEO	AUDIO
Run film for approximately one minute and thirty-four seconds.	
Stop film on this frame:	Comment: Yes, the held position by the male dancer who seems still internally as well as outwardly, is an equally expressive "force." Also, the stillness seems to make more clear the movement of the duet. Cunningham uses this technique throughout the dance. Watch for it.
 Figure 13 Stillness	Cunningham believes that there is no best stage spot. Unlike the two-dimensional space of the classical ballet, the stage area is viewed as an open field perspective where every point on the stage can be interesting. Look at the spatial distribution of the movement of the three dancers and the floating silver pillows during the first four minutes.
Rewind film to beginning.	
Film ready.	
Run film for approximately four minutes.	

VIDEO	AUDIO
Stop film on this frame:	Comment: Yes, the floating silver pillows and movement of the dancers seem to reorganize the spatial distribution of the stage; the spatial area is equal. Throughout the first four minutes of the dance, the cameras view the dance from a multi-directional, multi-facing point of view. The space appears to be defocused and equal to the viewer. This characteristic is peculiar to Cunningham's live performances also.

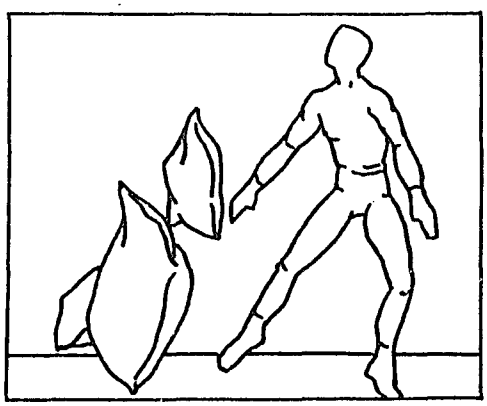



Figure 14 Defocusing of Space	
Rewind film to beginning.	Comment: Let's rewind the film to the beginning and focus our attention on the duet by Cunningham and the female dancer. The movement phrases, consisting of off-center (asymmetrical) torso and arm movements, are performed in opposition. They appear to be irregular and time-sensed; clearly, they do not parallel the music. Are the off-axis arm and torso movement

VIDEO

AUDIO

phrases repeated elsewhere in the first section of the dance? Watch closely, and call out "repeat" when you see one.

Film ready.

Run film for approximately three minutes and nineteen seconds.

Stop film on this frame:

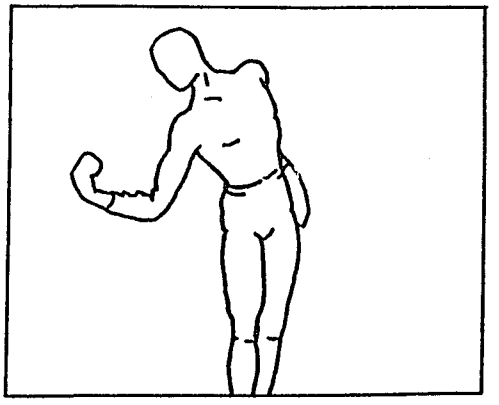


Figure 15

Repetition

Comment: Absolutely correct! After the female dancer completes her third circular crawl around Cunningham, the upstage left male dancer, who has been still, repeats two or more of Cunningham's initial asymmetrical arm and torso movements. Although he performs them in a more intense and percussive manner, they are essentially the same movements performed by Cunningham at the beginning of the dance.

Good! You are perceiving Cunningham's work well. His choreography is difficult to follow, as the movement phrases are non-metric. Also, they are sometimes

VIDEO	AUDIO
	fragmented (broken up) and seemingly illogical. As we continue viewing the rest of Section one, try to find movement phrases which seem to be illogically placed; that is, movement material that appears to be out of order. Call out "illogical" when you see such a movement, or movement phrase.
Continue running film for thirteen seconds.	
Stop film on this frame:	Comment: The male "duet" does appear to be out of order with the previously performed material. Cunningham and the other male dancer simultaneously performed overlapping movement phrases. Although both dancers performed similar movement material, the overlapping of their phrases made the "duet" appear unrelated, fragmented, and illogical. The bouncy "duet" of combined walks, jumps, and semi-triplets, provided a

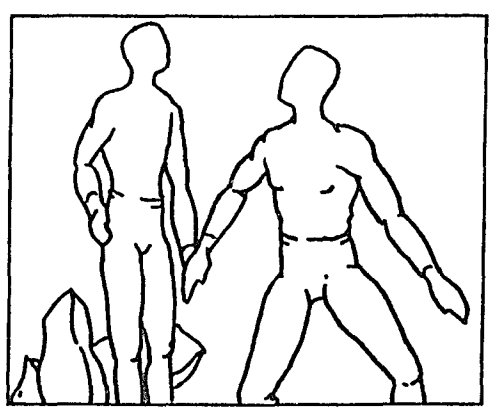


Figure 16

"Illogical" Contrasting Movement Phrase

VIDEO	AUDIO
	good contrast from the beginning slow and intense male/female duet. Let's look for more contrasting movement phrases. Watch for a change in the energy of the movement; that is, intensity, accent, and quality of movement. Also, be aware of the dancer's change of level and use of space.
Continue running film for approximately forty-two seconds.	
Stop film on this frame:	Comment: This transition is an excellent example of a contrasting movement phrase. Let's review what happened before it occurred. Cunningham performed a "duet" with the other male dancer; the female dancer entered and joined hands with Cunningham in a playful duet in which they lightly moved around in a circular pattern, and then performed a brief semi-prance in unison. The contrasting movement phrase occurred when Cunningham, without preparation or warning,

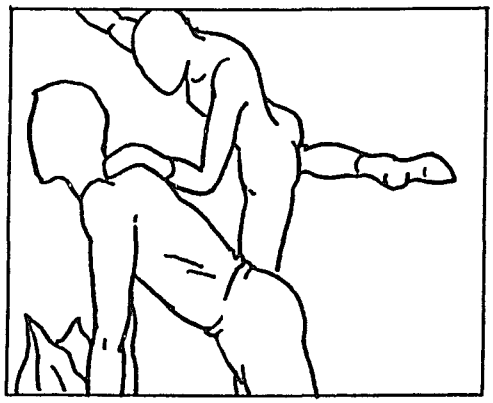


Figure 17

Contrasting Movement Phrase

VIDEO	AUDIO
	dropped suddenly to a hand-knee position on the floor, and the female dancer simultaneously moved into an attitude position balancing with one hand on his shoulder.
Rewind film to beginning of dance while continuing the commentary. Instruct students to review the checklist on pages 127-128 during this time.	This was our last stop. While the film is being rewound to the beginning, carefully review the general checklist of characteristics and discussion questions related to Cunningham's RAINFOREST. (See pages 127-128 for this checklist.) Then we will view the dance in its entirety once more.
Film ready.	
Show film in its entirety.	
	Instructions: Follow up the final showing of the film with a discussion of the general checklist of characteristics and questions related to Cunningham's RAINFOREST.

General Checklist of Characteristics and Discussion Questions Related to Cunningham's RAINFOREST

A. General Characteristics

1. Movement phrases which evolve in and out of stillness.
2. Walking and running movements which appear unstylized and natural.
3. The dancers achieve a delicate balance between natural grace and awkwardness.
4. Dancers move from a quiet center into sudden spurts of frenetic movement.
5. In the last two solos by Carolyn Brown (dancer with long hair) and Cunningham, the dancers sometimes execute movements of individual body parts simultaneously in different rhythms.
6. Note brief, abrupt shifts of mood, temperament, and style which appear to play upon one another within a short sequence of movement transitions. If you look away for a moment, you're apt to miss something!
7. Dancers begin many movement phrases without a sense of preparation or visible attack.
8. The frenetic movement actions in Section two are performed with perfect control.
9. All of these characteristics tend to create an incoherent, illogical, non-narrative movement vocabulary.

B. Discussion Questions

1. Does the movement make you feel the same way all of the time? If not, where and why do your responses differ?

2. When the dance is over, how do you feel about it? Relieved? Glad it's over? Sorry to see it end? What made you feel that way?
3. If you could see only a part of the dance again, what part would you choose? Why?
4. Where in the dance did you see two or more movement patterns happen at the same time?
5. Where in the dance did you see a movement go into stillness? When did you see a movement come out of stillness?
6. Did you see a dancer simultaneously move two or more body parts in a different rhythm?
7. Are there moments in the dance where the music seems to parallel the dance?
8. Do Cunningham's choreographic techniques differ from Martha Graham's?
9. Did the dance movement, silver pillows, and music seem to "go together?"

End of Script: RAINFOREST, by Merce Cunningham.

III. SCRIPT FOR COMPUTER: STATIONARY DANCE, BY JEANNE BEAMAN

Supplementary Preparation Materials for Instructor

Dance educator Jeanne Beaman started her pioneer work in computer generated dance in 1964 at the University of Pittsburgh. Computer choreography served as another approach to producing non-objective dance; that is, dance choreographed without any conscious emotional or literal connotations. The rationale behind this approach was an attempt to free the choreographer/dancer of what she felt might be a sterile memory bank of cliché movement patterns and choreographic ruts--that is, to release the programmed muscles and thinking processes. Therefore, the computer became a creative tool for choreography which, for Beaman, broke the bind, and provoked the choreographer/dancer's thinking into fresh and challenging channels.

Beaman's general choreographic techniques for composing a dance.

1. The technical data for computer choreography, such as algorithm (a technical method used by trained computer program specialists to program the computer), must be defined and developed in order to produce computer generated dances. Dale Isner, an assistant instructor in computer science at the University of Pittsburgh, used a programming language, called PENELOPE, which was oriented toward applications in non-numeric programming.

2. The first procedure consisted of defining dance as a sequence of steps. Each step consisted of a duration, a movement, and a spacing.

3. Beaman then proceeded to construct a set of dance phrases which consisted of a duration, a movement, and a spacing. A computer program was then written which read and constructed a list of twenty durations, a list of twenty movements, and a list of twenty spacings from Beaman's initial set of phrases.

4. A unit of dance material is then constructed by programming the computer to select randomly combinations from each of the duration, movement, and spacing lists, thereby generating a sentence or phrase composed of them.

5. A dance is then generated which consists of a number of units produced in this manner.

6. The area of the stage space in which the dance is to be performed is also programmed in PENELOPE. The area of the stage space is divided into numbered areas, analagous to a grid, and this allows some control to be imposed on the randomness when desired. For example, the control of the stage area can vary from that of performing a dance in one stationary spot on the stage (no change in designated grid area), to that of freely performing anywhere within the designated stage space grid (random stage space). Therefore, the dancer is directed by the computer print-out to move within or to a particular stage area as defined on the stage space grid, or to move at random.

7. Given the fact that it is possible to generate dances for any number of performers, the direction of the stage grid movement can be controlled by giving the dances specific directional titles such as Once Off Stay Off, Right to Left, and Forward and Back.

8. The print-outs are doubled-spaced to allow for easy reading; ten lines (sentences or phrases) average about ten minutes of dance. Any number of print-out lines for a dance is possible. Individual dances (solos) within a work may be programmed for different lengths of time, even though each dancer has the same number of lines.

9. The time (duration) directions of slow, medium, and fast, are counted by the individual dancer: one slow pulse beat is counted as 1234, one medium pulse beat is counted as 12, and one fast pulse beat is counted as 1. Directions which give a gradation from slow to fast are counted as the dancer feels the phrase should be performed.

10. Directional commands which call for the execution of shapes such as zig-zag, triangles, squares, and pentagons, are danced either as a path or direction on the floor, or as a path or design in the air. For example, the print-out may read: flex the right knee, make a triangle, four slow beats. The dancer(s) could perform this directional command by flexing the right knee, bracing the right foot against the left knee of the supporting leg, thus forming a clear triangle; or, the dancer(s) may make a triangle on the floor by hopping on the left foot, holding the right knee in a flexed position.

11. When the print-out randomly produces seemingly impossible combinations of movement, the dancer is led to discover movement that he might otherwise never find. For example, a print-out line may require the dancer to stay on the floor for one, two, three or more lines after the preceding line has directed him to fall; then the next line may randomly select another fall. How does one fall when one has already fallen?

12. Beaman insists on clarity; that is, the dancers must follow print-out directions to the extent that a viewer could simultaneously read the dancer's print-out and follow the dancer's performance of the dance.

13. Although the print-out directions are closely adhered to, the dancers are encouraged to make use of the inherent freedoms. For example, most directional commands do not include directions for the arms, head, and face. The possible range of positions offers many choices for the dancer. The pulse can be kept by hand claps, vocal noises, or audible counting. Perhaps one of the most significant freedoms is that of intensity. Beaman's computer generated dances leave this major dimension of the dance entirely up to the performer's judgement. Clearly, it is the quality of the intensity or force of movement which is a major factor in determining meaning.

14. The computer generated print-out dances may or may not lead to a good performance. The quality of the resultant dance is directly determined by the technical and choreographic skill of the people who work with the print-out. That is, good dancers and choreographers, not machines, make good dances.

15. Two dancers, working from the same computer print-out directions, may end up with dances which differ not only in skill but in the whole emotional import. Therefore, the choreographic statement is an open-ended one. The way in which the choreographer-dancer handles the space, time, and force, and how he chooses to resolve and join together each computer print-out line, ultimately determines the meaning given to the dance. Hence, the primary goal of the choreographer-dancer is

that of searching for the "soul" of the dance and making it tangible in the performance.

Beaman's key choreographic characteristics. Beaman's key choreographic characteristic is the searching for the "soul" of the dance and making it tangible in the performance. Her major intent is to make a direct sentient communication. That is, to produce non-objective works which will communicate directly to the senses.

1. Beaman's choreographic statement is an open-ended one. The choreographer-dancer intuitively interprets the print-out scores. Therefore, the way in which the choreographer-dancer handles the space, time, and force and how he chooses to resolve and join together each computer print-out line, ultimately determines the meaning given to the dance.

2. Organic continuity is established in the opening four or five computer print-out lines of a dance. Hence, the opening lines establish the "mood-style" and become the building blocks for the dance.

3. The primary qualities are variable and are determined by the computer print-out and the choreographer-dancer. The qualities of movement could be controlled to a certain degree by programming a dance with all fast or all slow durations over four beats.

4. Titles of the dances are both specific and abstract. For example, titles such as Cluster at the Center, Once Off Stay Off, etc., are specific and abstract titles of dances which control the direction of the movement on the stage (grid) area.

5. Random indeterminacy becomes determinate when the choreographer-dancer makes a conscious decision to accept or reject what

chances forth from his computer print-out. At this point chance becomes choice.

6. Sound may be established by the use of an electronic metronome reading, handclapping, vocal noises, audible counting, or music.

7. The dynamics and intensity are determined by the performer.

8. Time is left to the discretion of the individual dancer.

For example, the dancer performs the computer print-out movement directions in terms of a given pulse of slow (counted 1234 per pulse), medium (counted 12 per pulse), and fast (counted 1 per pulse). Directions which give a gradation from slow to fast are counted as the dancer feels it.

General and Specific Analysis to Accompany Showing of STATIONARY DANCE

It is suggested that the instructor be thoroughly familiar with both the general and specific analysis of the script and the film so as to facilitate a more meaningful learning experience for the students. The introduction to Jeanne Beaman and the general analysis of STATIONARY DANCE are designed to be used by the instructor in preparation for the showing of the film. For example, the introduction and the general analysis may be read and/or discussed with the class prior to the showing of the film. The audio is the commentary to be spoken as the film is shown, and consists of the specific analysis of approximately the first fifty seconds of STATIONARY DANCE. The video portion of the script includes how and when to operate the film, illustrations of "still" frames related to the audio commentary portions of the script at given points, and the approximate length of time in minutes and seconds which the film must be run to identify the material covered in the script.

Introduction: Jeanne Beaman. Beaman openly welcomed the synthesis of art and technology as being quite proper and very much to the point. Her interest in computer choreography was inspired initially by Merce Cunningham's exploration of chance choreography. Her impression was that the computer could accomplish this process much faster.

Using the computer as a creative tool, Beaman pioneered and developed an innovative non-objective (devoid of literal or emotional connotations) choreographic technique which provided a more flexible, creative, and objective approach to choreography. Equally important, Beaman's computer generated choreography allowed the choreographer-dancer to make the aesthetic choices.

Beaman's early training began with the classical ballet, studying and performing with Adolph Bolm and Michel Fokine. Her training in the modern dance began with Hanya Holm, Martha Graham, Louis Horst, and Doris Humphrey and Charles Weidman at Bennington College in 1938. Her background training also included further study with a number of other outstanding modern dancers, notably José Limon, Mary O'Donnell, Gertrude Shurr, and Merce Cunningham.

As a teacher of the dance, she held college positions from 1942 through 1974. It is significant to note that although she was steeped in the classical ballet and modern dance, her pioneer work with computer generated choreography served as a point of departure from the choreographic influences of her early training.

Clearly, her innovative non-objective choreographic technique should stimulate, inspire, and challenge other dance educators to more creative endeavors. Being cognizant that art becomes more viable when

it is free of inflexible rules and limitations, her search to know more about how to promote individual creative growth was constant. And in this task, she was keenly aware of the kind of growth she chose to cultivate. Beaman realized the problems inherent in the indeterminate-random methodological approach to choreography, so she gave her student/dancers the simple guidelines they needed, not "rules."

General analysis of STATIONARY DANCE. An illustration of the stage (grid) with numbered areas, and the computer print-out scores for both dancers, are included for reference so that the instructor and students may study more carefully the materials for the dance.

STAGE LAYOUT

	13	14	15	
12	1	2	3	16
11	4	5	6	17
10	7	8	9	18

[DOWN STAGE]

NUMBER OF DANCES 1
NUMBER OF DANCERS 2
NUMBER OF LINES PER DANCER 10
TITLE OF DANCES STATIONARY DANCE

Figure 18

Computer Print-Out of Stage Area Grid

1. Definition of Abbreviations and Terms for the Computer Print-Out Scores for STATIONARY DANCE.

Backward = Bkwd.

Clockwise = CW

Counter clockwise = CCW

Forward = Fowd.

Right = Rt.

Slow to Fast = S to F

Slow to Fast to Slow = S to F to S

Hexagon = A six-sided shape

Pentagon = A five-sided shape

Triangle = A three-sided shape

Triplet = A three-part movement or step

2. Computer Print-Out Scores for STATIONARY DANCE(79)

Random dances computer output
Dancer 1 at 9 [dancer in black]
Dance 1
STATIONARY DANCE
[Line]

1. Stay at 9, four medium tempo triplets, walk heel toe, zig-zag left.
2. Stay at 9, three slow tempo triplets, stand on right leg, arc side left.
3. Stay at 9, ten beats F to S to F, walk on tip toes, choose your movement direction.
4. Stay at 9, eight slow beats, flex right knee and rotate lower leg CCW, arc forward.
5. Stay at 9, six medium tempo triplets, run then leap, forward.
6. Stay at 9, five fast beats, fall and do not rise for two lines, alternate diag rt fowd and diag left bkwd.
7. Stay at 9, three slow tempo triplets, fall and do not rise for two lines, diagonally left backward.

Random dances computer output
Dancer 2 at 4 [dancer in white]
Dance 1
STATIONARY DANCE
[Line]

1. Stay at 4, nine medium beats, rotate left shoulder clockwise, diag rt bkwd then return then diag left bkwd.
2. Stay at 4, five medium tempo triplets, rotate both shoulders clockwise, make a pentagon.
3. Stay at 4, three medium beats, leap then run, diagonally right backward.
4. Stay at 4, eight beats S to F to S, run as many as desired, no change in space.
5. Stay at 4, three slow beats, plié in second position and rise, alternate diag rt forwd and diag left bkwd.
6. Stay at 4, three slow beats, fall and do not rise until next line, diagonally left backward.

8. Stay at 9, four slow tempo triplets, full turn clockwise, side right.

9. Stay at 9, eight beats slow to fast, fall and do not rise for five lines, zig-zag right.

10. Stay at 9, ten beats fast to slow, rotate left hip counter-clockwise make a triangle.

7. Stay at 4, seven medium beats, move left arm only, arc forward.

8. Stay at 4, ten beats S to F to S, quarter turn counter-clockwise, make a hexagon.

9. Stay at 4, fifteen beats fast to slow, walk with legs bent, choose your movement direction.

10. Stay at 4, four medium beats, flex left knee and rotate lower leg CW, make a pentagon.

The entire dance is approximately one minute and twenty seconds long. Both dancers stand in stillness for ten seconds before they simultaneously begin the dance on the sixth measure of the drum beat.

Almost without exception the dance is one of contrast. For example, the dancer in white performs a small isolated rotation of the left shoulder, while the dancer in black stretches the entire body by arcing to the left; the dancer in white moves slowly on the floor, as the dancer in black simultaneously performs a high, fast triplet-leap combination.

Throughout the dance, each dancer performs a total of four movement phrases of varied lengths. An analysis of the movement phrases for both dancers is given so that the instructor and students may review the computer print-out scores and determine how each dancer chose to handle the time, space, and force, and how she chose to resolve and join together each computer print-out line.

Dancer One at Stage Area Nine:

Phrase one is comprised of the first three lines (see page 137); the length is approximately eighteen seconds.

Phrase two consists of line four; the length is approximately twenty-three seconds.

Phrase three consists of line five; the length is approximately ten seconds.

Phrase four is comprised of lines six through ten; the length is approximately thirty seconds.

Dancer Two at Stage Area Four:

Phrase one is comprised of lines one and two; the length is approximately fifteen and one-half seconds.

Phrase two is comprised of lines three and four; the length is approximately eight seconds.

Phrase three is comprised of lines five and six; the length is approximately twenty-three and one-half seconds.

Phrase four is comprised of lines seven through ten; the length is approximately thirty-three seconds.

Specific analysis of approximately the first fifty seconds of STATIONARY DANCE.

VIDEO	AUDIO
Film ready.	Instructions: Read or discuss with the class the introduction to Beaman. Discuss Beaman's general choreographic techniques for composing a dance. Have the class review the general checklist of characteristics and discussion questions on pages 149-150. Explain the computer print-out stage grid to the class. Define a phrase as being analogous to a sentence. A phrase may be considered as a sequence or series of organized, related movements which give a sense of unity. It may have a single length and tempo or it may contain several combined tempi. The length and the tempo of a phrase are usually developed around the contour or shape of the movement to be developed; that is, the phrase is generally developed according to the dancer's motor

VIDEO	AUDIO
	logic. Instruct the class to watch for the end of movement phrases.
Show film in its entirety.	
Stop film. Rewind film to beginning.	Comment: As we rewind the film to the beginning, review your computer print-out of the dance. Which lines were joined together to make a phrase? As we view the film again, focus your attention on the dancer dressed in white. She is Dancer 2 at Stage grid 4 on your computer print-out score. As you watch, see if you can identify the ending of her first phrase. Call out "end of phrase" when you see it.
Film ready.	
Run film for approximately fifteen and one-half seconds.	

VIDEO

AUDIO

Stop film on this frame:

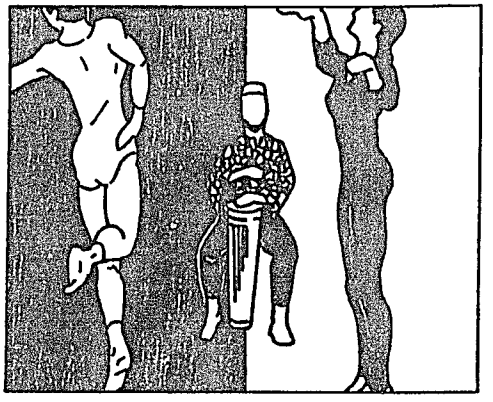
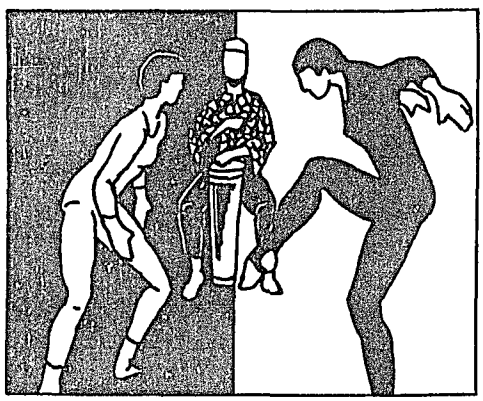


Figure 19

End of Phrase One
(Dancer in White)

Continue running film for approximately eight seconds.

Comment: Yes, this is the end of the first phrase as danced by the dancer dressed in white. Now, look at your print-out score for Dancer 2 at 4. How many lines did she combine to make a phrase? Correct! She combined lines one and two. Before we continue to view the film, look at the computer print-out for lines three and four for the same dancer. Let's look at how the dancer joined the two lines to make the second phrase. Call out "end of phrase" when you see it.

VIDEO	AUDIO
Stop film on this frame:	Comment: Yes, this frame shows the end of the second phrase. The movements in lines three and four were performed in an effortless manner. The dancer seemed to sense where to bridge or connect the two lines.
	Now look at her next two lines--five and six. She has combined these two for her third phrase. As we continue to run the film, watch to see how she connects lines five and six. Then look for the beginning of the fourth phrase. Call out as before when you think you see it.
Figure 20 End of Phrase Two (Dancer in White)	
Continue running film for twenty-three and one-half seconds.	

VIDEO	AUDIO
Stop film on this frame:	Comment: That's correct. As we look at this frame, refer also to line seven of the computer print-out score for Dancer 2. The beginning of phrase four occurs when dancer two on the floor strikes forward in an arc. Very good, class. Now, as we continue the film, watch dancer two as she performs the rest of the fourth phrase.

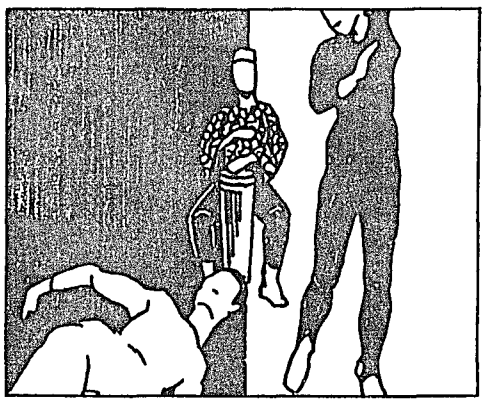



Figure 21 Beginning of Phrase Four (Dancer in White)	
Continue running film to the end of the dance.	
Rewind film to beginning.	Comment: Phrase four consisted of sharp, angular-shaped designs. Let's rewind the film to the beginning. As we watch the film again, focus your attention upon Dancer 1, dressed in black. See if you can identify the end of her first phrase. Watch carefully, it may be more difficult to identify. Call out as before when you think you see it.

VIDEO	AUDIO
Film ready.	
Run film for approximately eighteen seconds.	
Stop film on this frame:	Comment: Very good! Her first phrase is approximately eleven measures of 4/4 meter. It ends just as the dancer is going down into a one-leg balance position. Again, look at the computer print-out score for Dancer 1. How many lines did she combine to make the eighteen-second phrase? Yes, the first three lines were combined. Now, look at line four of the print-out for the same dancer. This line is danced as phrase two. As we continue to run the film, see how she chose to use the space, time, direction, and intensity. Call out as before when you see the end of phrase two.

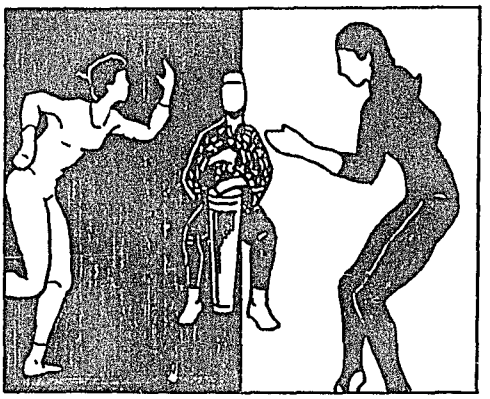



Figure 22 End of Phrase One (Dancer in Black)	
Continue running film for approximately twenty-three seconds.	

VIDEO | AUDIO

Stop film on this frame:

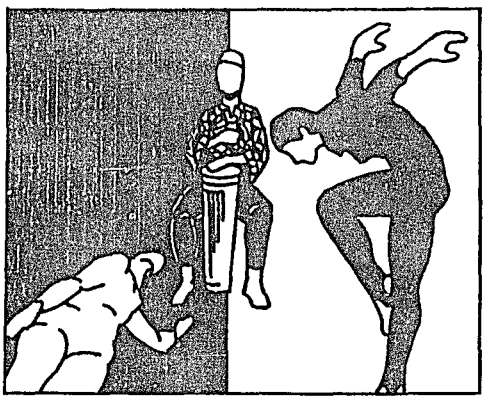


Figure 23

End of Phrase Two
(Dancer in Black)

Comment: Yes, here is the end of her second phrase. She performed a beautiful sustained shape for line four of the computer print-out. Did you notice how she made the arms and head an integral part of the phrase? The phrase appeared to develop in a natural manner; that is, it flowed from the beginning to the end. It did not look mechanical or forced. Let's continue to focus our attention on the same dancer. Her third phrase consists of line five of the computer print-out. It is only ten seconds long. Before we watch the completion of her dance, carefully read lines six through ten of the computer print-out for Dancer 1. These lines appear to be impossible to perform. For example, how does one fall after one has already fallen? As we continue to run the film, let's see how she dances these lines.

VIDEO	AUDIO
Continue running film to the end of the dance.	
	Comment: Now, let's consider our earlier question--How does one fall after one has already fallen? How would you have resolved this seemingly impossible movement directive? Because the print-out directed her not to rise from the initial fall to the floor in line six, the dancer danced lines six through ten on the floor. Her performance of these lines was beautifully executed.
Rewind film to beginning of dance while continuing the commentary. Instruct students to review the checklist on pages 149-150 during this time.	This was our last stop. For the purpose of analyzing the dance, we have compared the print-out scores with each dancer's performance. This time let's view the dance as a duet. While the film is being rewound to the beginning, carefully review the general checklist of characteristics and discussion questions related to Beaman's STATIONARY

VIDEO	AUDIO
	DANCE. (See pages 149-150 for this checklist.) Then we will view the dance in its entirety once more.
Film ready.	
Show film in its entirety.	
	Instructions: Follow up the final showing of the film with a discussion of the general checklist of characteristics and questions related to Beaman's STATIONARY DANCE.

General Checklist of Characteristics and Discussion Questions Related to Beaman's STATIONARY DANCE.

A. General Characteristics

1. Both dancers are limited to one restrictive stationary spatial area on the stage (grid).
2. The black and white leotards and tights create a maximum contrast.
3. Since the computer print-out does not give specific directions pertaining to how the quality or intensity of the movements are to be performed, each dancer has the freedom to determine her own quality or intensity.
4. The movement combinations danced by each individual look challenging and unique.
5. The way in which each dancer handles the space, time, and force, and how they resolve and join together each line of the computer print-out determines the meaning given to the dance.
6. Each dancer incorporated into the dance the use of body parts (arms, head, and face) which were not given on the computer print-out.
7. Each dancer shapes the computer generated dance of the print-out to her own technical ability.
8. The opening four or five lines of the dance establish the "mood-style" and are the building blocks for the rest of the dance.
9. The choreographic statement is an open-ended one.

10. The title of the dance is both specific and abstract.
11. The dance makes a direct sentient communication; that is, it can be perceived by one's senses.

B. Discussion Questions

1. The dance was one of almost total contrast. At what point in the dance was the contrast lessened? In what way? Tempo? Intensity?
2. Did the black/white division of the performing area and the dancers' contrasting costumes have any effect on the "mood" of the dance?
3. How did the seated drummer affect the dance?
4. At any point during the dance, did both the dancers begin or end a movement phrase simultaneously?
5. Does the fact that this dance was generated by a computer give the dance distinguishing characteristics not found in other choreographic works?
6. Which section of the dance did you like the least? Why? Which section of the dance did you like the best? Why?
7. Did you like the way the space was used? Why?
8. Did you see a relationship between the design, lines or rhythm?
9. Did the dance have strong or light dynamics? Did one part or sequence seem more intense?

End of Script: STATIONARY DANCE, by Jeanne Beaman.

SUMMARY

An important part of dance education is viewing current choreographic approaches with awareness and appreciation. Dance education should include opportunities to view current dance programs of quality presented both on film and in live performances. When the viewing of live performances is not possible, professionally made films can be used to bring concert works of current modern dance approaches to choreography into the classroom. The use of films accompanied by supplementary written scripts can be a valid aid to the viewing experience, and thereby enhance the learning process for students.

Objectives for Using Films with Accompanying Scripts

The material presented in the scripts may be used by the instructor to (1) make the student more aware of the similarities and differences between current non-objective choreographic approaches, (2) provide a quick frame of reference for contrasting and comparing three non-objective choreographic approaches, (3) help illuminate kinesthetic and aesthetic concepts, (4) help the student understand how the selected non-objective choreographer explores, discovers, and manipulates the selected movement materials for a dance in a particular way, and (5) better prepare the student to select and experiment with the non-objective choreographic approaches in his own choreographic efforts.

The following is a brief summary of the key points analyzed in the scripts of Nikolais' FUSION, Cunningham's RAINFOREST, and Beaman's STATIONARY DANCE.

1. Approaches to non-objective choreography.

Nikolais: He is concerned with movement for its own sake; his works are devoid of emotional or literal connotations. The multimedia technique is achieved by creating a gestalt; i.e., by putting a series of events in an order related to the specific intent of the choreographer so that they will come together as a unified whole. pp. 12, 18-28, 31-33, 89, 106.

Cunningham: His primary concern is with human activity. That is, he is interested in movement for its own sake. His works are devoid of narrative, philosophical, psychological, or mythical pretensions. Purified of literal meaning, they are designed to "say" nothing; rather, simply to be. Using chance/indeterminacy techniques, he freed himself from established structures, movements, and restrictions. pp. 12, 34-61, 109-15, 113-16.

Beaman: Her primary concern is freeing the choreographer-dancer from his habitual, self-imposed limitations and sterility. Using the computer as a creative tool, she developed an innovative chance technique which could produce computer generated dances. This approach provided a more flexible, creative, and objective approach to choreography. pp. 12, 61-83, 129-39, 149-50.

2. General analysis of overall structure.

Nikolais' FUSION is a suite of dances whereby a special continuity and total unity of the sections are achieved by creating a relationship between the new and recurring choreographic materials. pp. 22-29, 84, 89-92, 94-97, 101-02, 106.

Cunningham's RAINFOREST is analogous to an A B structure which appears to be alogical; i.e., the two sections do not appear to be related to each other. pp. 35-42, 44-49, 51-52, 59, 61, 109, 115-20.

Beaman's STATIONARY DANCE is analogous to a simple A structure. How the ten unrelated computer print-out lines are resolved and joined together is left entirely to the performer's judgement. pp. 64, 67, 69, 74-78, 81-82, 128, 130-50.

3. Specific analysis of ways of making phrases.

Nikolais' phrases are developed according to the dancer's motor logic. pp. 24-26, 97-100.

Cunningham's phrases are time-sensed and appear to be illogical. pp. 41-52, 54, 59, 109, 114, 116-17, 120-27.

Beaman's phrases are developed by how the individual dancer chooses to resolve and join together the lines on the computer print-out. pp. 64, 67, 69, 74-75, 80-82, 130-34, 137-39, 141-49.

4. The use of repetition and manipulation.

Nikolais' line and shape are repeated. pp. 22-24, 27-29, 74, 101-04.

Cunningham's non-metric, time-sensed line and shape are repeated. pp. 42-43, 46-47, 49-51, 120-23, 127.

Beaman's combined computer print-out lines are the manipulations of the print-out movement directives. pp. 64, 67, 69, 74-76, 80-82, 130-32, 146-47, 149-50.

5. The use of contrast in time, rhythm, line or shape.

Nikolais used juxtapositions and superimpositions of shapes/

designs of dancers, sound, color, motion, and towels. pp. 18, 20-24, 26-29, 103.

Cunningham's chance/indeterminacy methods produced materials which he designed into contrasting relationships in the dancer's movement-stillness scores. pp. 38, 45-52, 60, 109-18, 120-24.

Beaman's costumes, stage design, and each dancer's interpretation of her print-out movement score was one of contrast. pp. 67, 69, 74-78, 80-82, 130-34, 137-39, 141-50.

It was necessary to restrict the script analysis to specific choreographic techniques and characteristics. A detailed analysis and explanation of each dance was avoided so that the students could react to the performance spontaneously. Also, some things cannot be viewed in the films, such as the development of the score for the chance approach, or the development of the program for the computer. What can be seen are the results or products of these approaches, and they can be studied for structure, use of choreographic techniques, and qualities of movement. For example, each student has the opportunity to view the way in which each choreographer chose to employ time, space, and energy or force. The choreographic works can also be studied for the "magic," "illusion," or "poetry" created. Seeing choreographic concepts actually function in a completed work, clarifies and reinforces many points and stimulates many new ideas for using choreographic techniques. By helping the students become aware of these concepts, they gain a rich experience to build upon which, as it grows, enhances their existence, the aim of education, and most especially, the reason for art.

TRIAL RUN OF ONE FILM AND THE ACCOMPANYING SCRIPT WITH AN ELEMENTARY MODERN DANCE CLASS

After the scripts were written, a trial run of Nikolais' FUSION and its accompanying script was administered to an elementary modern dance class. The purpose of the trial run was to ascertain any problems in the organization and presentation of the content of the script, and to determine if the script were a practical and workable tool which could be used to enhance the learning experiences of the students. Since all three scripts developed for this study were written using the same basic format and organization of content, it was felt that only one trial run of one of the films and its accompanying script was necessary to serve the above purpose effectively.

In order to prepare the students for the presentation of the material, they were asked to research and write a short paper on the non-objective choreography of Alwin Nikolais, due one week prior to the viewing of FUSION. One class period preceding the actual presentation of the Nikolais film and script, the students shared and discussed the findings of their research work. At the beginning of the next scheduled dance class, the writer distributed the following materials to the students before the viewing of Nikolais' FUSION: Nikolais' General Choreographic Techniques for Composing a Dance, his Key Choreographic Characteristics, and the General Checklist of Characteristics and Discussion Questions Related to Nikolais' FUSION. The students were given a short time to review the material, after which the writer proceeded with the script and showing of the film as written in the dissertation.

The overall results of the trial run of the script were very encouraging. The students were a few seconds late in identifying exact endings of the sections of the dance. However, they did succeed in identifying them. They had no difficulty in identifying the ending of the first and second movement phrases. They were challenged to the point of wanting to identify additional phrases. The identification of the first movement repetition/manipulation was more difficult, but they were quick to identify the second repetition/manipulation. It is interesting to note that the students were stimulated to the point of attempting to identify additional phrases and repetitions/manipulations. After seeing the film for the last time, each student was asked to read aloud and comment about one of the statements from the General Checklist of Characteristics and Discussion Questions. The student comments categorized and listed below are indicative of the students' interest, enthusiasm, and ability to comprehend and perceive the content of the script.

Discussion Questions and Responses

Question 1. Did one element, such as light, color, or shapes seem more important than another? If so, where?

Responses:

"The shapes seemed more important than anything else. They made use of the shapes more."

"The dancers' bodies and the use of towels."

"Everything is so fused that even though the dancers are there, they're not more important than the towels, lights, or other props."

Question 2. What is your favorite spot in the dance? Why?

Responses:

"The first two sections. The movement--I could associate the movement with the music."

"The part where the dancers are sitting on three different levels, and they use this motion with their arms and knees, slamming, then hitting, and vibrating their arms. Why do I like it? Because I like unison movements."

"I liked the part where they were lying down in a circle, moving the towels up and down; and the section showing the towels moving."

"I liked the part where they had the props, and they looked as if they were moving on the water. Why? Because I like water. I like fish and the way they move. It made me think of fish--it looked like they were floating."

"I liked the first section because it was simple and didn't have props."

Question 4. What was the relationship of the floral and cubistic designs of the towels to the shapes and designs made by the dancers?

Responses:

"The dancers followed what the towels had done."

"The cubistic designs of the towels related to the angular designs of the dancers."

"The sculptural designs of the dancers related to the floral designs of the towels."

Question 6. What do you think would happen to the continuity of the dance if a section were omitted?

Responses:

"Probably would lose it, because it's kind of like a sonata form. The fourth section has ideas from the first three sections. It's all tied together; it's all a recapitulation."

"You couldn't switch it around, because then when you got to the last part, you wouldn't be able to tell as much that they were

taking little sections from each of the first three sections. It would be easy to recognize."

"You might be able to switch sections two and three."

Question 8. Identify the section of the dance where only parts of the dancer's body were visible.

Responses:

"Well for one thing, it was definitely the first part with the rectangular parts, because you could never see the dancer's whole body. Like, even if you could see most of it, you still couldn't see maybe their feet or the bottom parts of their legs. Why do you think he used that rectangular slot?"

"Peeping-tom! It's like you're looking through a key hole almost. You're kind of curious about the part you can't see!"

"The slots made me want to zero in on the dancers."

Concluding General Comments by the Students

"I liked it. It's different! The second time I saw it, I liked it better because I knew what to look for. I was looking for specific things and I found them."

"The dance is different because it's not traditional dance. It's not 'shuffle off to Buffalo.' It's the movement, the shapes and forms, rather than turn here, count three, wait, jump up and down, and do all this other stuff. And even the dancers' forms are a break-away from traditional forms that you assume in dance. You know, when the guy picks the girl up, you would think that she would assume some posture that is grand, and yet here she just flops down on top of him like this, which is different."

"The way they used the props was related to how they danced with each other."

"The first time I saw it I really didn't like it, because it was so abstract. It was so different from anything I've ever seen. I would like to see a live performance."

"The first time I saw it, I thought it was a bad trip. It was weird."

"One thing that really bothered me about it was that all the dancers had stockings over their heads. This was so to dehumanize the dancers. Also, you couldn't really pick out the dancer to watch. You couldn't tell who was doing what. Was he [Nikolais] into drugs?"

"It looked as if he made the dance and music together, because they fit so well."

"The music is run backward in places. The film is also run backward. There were speeded up sections and slowed down parts."

"I thought that the dance looked computerized. There was not a whole lot of softness. It was the same kind of emotion all the way through."

"When you look at it for the second time and analyze the sections and phrases, etc., it seems more like a conventional dance, because you realize that they had to have tempo, some repetition, and things like that. When you're looking at it for the first time it's so weird that you don't even notice it."

"The dancer's space extended beyond her fingertips. I found it hard to believe that the dancers could do the dance again the same way. I don't like the camera tricks."

"I was bored with the dance the first time we saw it. Each time we saw it, I liked it more."

"The dancers moved as though they were in water."

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

In the late 1950's and the early 1960's, a historical eruption occurred in the modern dance. In essence, it was a choreographic revolution, heralding a deliberate break from the literal, dramatic, emotional expressiveness to that of the non-literal, non-expressive dance. For example, three non-objective choreographic techniques which have helped to influence the dance of the 1970's include multi-media, chance/indeterminacy, and computer choreography.

In the past decade, rapid transformations have occurred in the professional dance studio. It is doubtful that such transformations are occurring in the dance on the campus scene. Hence, various dance educators, critics, and professional choreographers suspect that a cultural lag exists between the professional choreographic innovations and the choreographic experiences offered in various colleges. Reasons given for the cultural lag include geographic isolation from the dance centers, infrequent exposure to current dance trends, and the scarcity of qualified people to inform educators about the changes occurring in dance. The problem is further compounded by the strict financial limitations of the college/university budget allocations. This has severely hampered opportunities to bring professional dance companies to the campus for performances.

Clearly, then, one of the challenging problems faced by the dance educator is that of keeping abreast of the current dance innovations. An abundance of written material about dance in higher education does exist. However, the current choreographic approaches are almost entirely omitted. Some of the written and verbal communications about the current non-objective choreographic techniques tend to be ambiguous and confusing. Therefore, both dance educators and students alike are confronted with the task of making sense out of the terminology, obscure illusions, aphorisms, and various pronouncements of the current dance scene.

Before a more comprehensive understanding of the current non-objective techniques can take place, both the teacher and the student must be exposed to a variety of visual comparisons of both verbal and nonverbal choreographic approaches. Aesthetic discipline can be achieved by (1) acquiring the craft of choreography, (2) acquiring an understanding of what choreographers of the past have done, and what the current choreographers are attempting to do by identifying, clarifying, and classifying the characteristics peculiar to their art techniques, and by (3) creating and performing works which embody the key characteristics of the artist's choreography.

The essential current choreographic characteristics should be described operationally and ordered in an open-ended manner so as to provide the student a choice of selection. At the same time, while the student is gaining facility with the craft, a more expedient and comprehensive grasp of the content and form could be achieved by

visually perceiving examples of the current choreographic approaches through the use of 16 millimeter films.

The use of good dance films accompanied by written scripts may be one way of bridging the choreographic gap between dance educators and the professional choreographers. The purpose of this study was to prepare three written scripts suitable for use in choreography classes on the college level. The scripts identified, analyzed, and clarified the current choreographic approaches of three non-objective contemporary dance artists. The three selected choreographic approaches were multimedia by Alwin Nikolais, chance/indeterminacy by Merce Cunningham, and computer by Jeanne Beaman. The scripts were organized to provide a flexible supplement and guide for viewing the selected films pertaining to the non-objective choreographic approaches of these choreographers. The three available films selected for analysis in the scripts were FUSION by Alwin Nikolais, RAINFOREST by Merce Cunningham, and STATIONARY DANCE by Jeanne Beaman.

Conclusions

Dance is a visual art form, and its visual components constitute and operate as a contained and complete language system of motion. As an artistic form of communication, it is the vehicle for the expression of the human condition through motion of the human body. The beginning student should be recognized as a potential artist whose individual creativity and vision must be guided, developed, and nurtured in the total realm of choreography. Studying the disciplines of the choreographic processes of the past and current dance artists should be a

vital objective and a responsibility of the dance educator. Only then will growth be cultivated to enable the student to experience, to choose, and to alter the concepts to his personal vision.

As audio-visual equipment is made available to educational institutions, every effort should be made to use this medium as an educational tool for both viewing and analyzing the artist's personal style, choreographic structure, and exploratory techniques. Films of the current choreographic innovations, accompanied by scripts, could help close the cultural choreographic gap which seems to exist between dance at the college level and dance as practiced by professional choreographers, and could provide the needed constructs for a pedagogical synthesis in both physical education and interdisciplinary studies.

Three scripts, suitable for use in choreography classes on the college level, were designed to identify, clarify, and analyze three non-objective choreographic techniques: Alwin Nikolais' multimedia, Merce Cunningham's chance/indeterminacy, and Jeanne Beaman's computer dance. The scripts may be used as supplementary aids for viewing the three available 16 millimeter films selected for analysis: FUSION by Nikolais, RAINFOREST by Cunningham, and STATIONARY DANCE by Beaman.

In order to make each script practical in content and organization, the materials were structured in two parts. Part One consisted of supplementary preparation materials for the instructor. This included suggested guidelines for use of the scripts, the choreographer's general choreographic techniques for composing a dance, and the choreographer's key choreographic characteristics. Part Two consisted of the video-audio analysis to accompany the showing of the

film. This included a brief introduction to the nature and background of the choreographer, a general analysis of the film, the specific analysis of approximately the first fifty seconds of the film, and a general checklist of characteristics and discussion questions related to the choreographer's work. The audio portion of the script consisted of the commentary to be spoken as the film is shown. The video portion of the script included how and when to operate the film, illustrations of "still" frames related to the audio-commentary portion of the scipt at given points, and the approximate length of time in minutes and seconds which the film must be run to identify the material covered in the script's commentary analysis.

Before the films and accompanying scripts can be used to improve the speed and quality of learning, careful preparations for correct use of the materials should be made. The instructor should view and classify all the materials, and prepare the students for the viewing of the film. The main points of the film, script, and supplementary materials should then be discussed as a follow-up to the showing of the film.

Professionally made films can be used to bring concert works of current modern dance choreographic approaches into the classroom. The available 16 millimeter films accompanied by scripts can definitely contribute to the learning of specific knowledge and skills associated with the current non-objective choreographic techniques. They are valuable teaching aids in dance primarily because they show physical motion. Both the films and accompanying scripts can compel attention, magnify important characteristics of the dance, and offer a satisfying aesthetic experience.

Recommendations

Other ways of closing the cultural choreogaphic gap which seems to exist between dance in the colleges and professional choreographers include the following:

1. Television has played an important role in the development of dance in America, and can be used to develop the dance experience of the college student. Since dance deals with the creation of visual images, it is very suitable for television orientation. Television has stressed the immediacy of the dance. More major television networks are producing dance programs of major ballet and modern dance companies. For example, PBS devoted one and a half hours to the American Ballet Company. Camera Three (CBS) produced a two-part program of the work of Merce Cunningham. It has also introduced American audiences to Twyla Tharpe's "Bix Pieces." This year, WNET has scheduled the production of a series of dance programs. The first program, presented in January, 1976, consisted of several outstanding choreographic classics such as Kurt Jooss' "The Green Table," Arpino's "Trinity," and others. Alwin Nikolais' "Relay" (1972) was created especially for NET/BBCTV, and is another example of the successful marriage of dance with a medium of limitless possibilities. More choreographers are working with the television medium. Therefore, television can perhaps make American audiences larger, more alive, and more responsive to the dance. Dance educators should keep a weekly check on the scheduling of such events, and require their dance classes to view them.

2. There are many dance films and tapes in the New York Public Library that need to be put in a form that will make possible their

availability to the public. Archives are a necessity to preserve dance history, but the people should have access to these materials. Perhaps it will be just a matter of time before monies are made available for adapting these materials as educational resources for use by colleges, high schools, and libraries. As college audio-visual services expand their dance film library resources, a cooperative system of inter-library loan can make possible greater sharing and dissemination of dance films.

3. The dance educator, located in areas remote from the major dance centers, may now seek financial aid from the National Endowment for the Arts and the local state arts agencies to cosponsor the bringing of outstanding professional dance companies and dance specialists to the campus. The dance company may conduct and give classes, demonstrations, mini-concerts, and teacher workshops, in addition to presenting at least one concert performance for the general public. The ultimate value of having a nationally known dance company brought to a community could provide the extra dimension needed to promote a greater understanding and appreciation of current professional dance, and also help to focus public attention on the dance in schools.

4. To further close the gap, the dance educator could keep herself and her students abreast of the current trends occurring in related art forms such as music, painting, sculpture, architecture, drama, and films.

5. More dance education books need to include material related to non-objective choreographic aesthetics, techniques, and characteristics of current dance approaches.

Both the use of dance films accompanied by scripts, and the recommendations given here, can help provide viable ways by which the dance educator and student can attain a more expedient and comprehensive grasp of current choreographic approaches.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. Books

1. Amberg, George. Ballet in America. New York: The New American Library, 1949.

2. Cunningham, Merce. Changes: Notes on Choreography, ed. Frances Starr. New York: Something Else Press, Inc., 1968.

3. Duberman, Martin. Black Mountain. New York: E. P. Dutton, 1972.

4. Ellfeldt, Lois. A Primer for Choreographers. Palo Alto, California: National Press Books, 1967.

5. Gropius, Walter, Oskar Schlemmer, Moholy-Nagy, Farkas Molnár. The Theater of the Bauhaus. Connecticut: Wesleyan University Press, 1967.

6. Hall, James B., and Barry Ulanvo, eds. Modern Culture and the Arts. New York: McGraw-Hill Book Company, 1967.

7. Hawkins, Alma. Creating Through Dance. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., c. 1964.

8. Klosty, James, ed. Merce Cunningham. New York: E. P. Dutton and Company, Inc., 1974.

9. Kostelanetz, Richard, ed. The New American Arts. New York: Horizon Press, 1965.

10. Kuh, Katharine. The Open Eye. New York: Harper and Row Publishers, 1971.

11. Mahoney, Margaret, ed. The Arts on Campus: The Necessity for Change. Greenwich, Connecticut: New York Graphic Society, Ltd., 1970.

12. McDonagh, Don. The Rise and Fall and Rise of Modern Dance. New York: Outerbridge and Dienstfrey, 1970.

13. Percival, John. Experimental Dance. New York: Universe Books, 1971.

14. Rainer, Yvonne. Work 1961-73. New York: New York University Press, 1974.

15. Seigel, Marcia. At the Vanishing Point: A Critic Looks at Dance. New York: Saturday Review Press, 1972.

16. Stoddard, G. D., Irwin Edman, and Bruno Bettleheim. Art: The Measure of Man. New York: The Museum of Modern Art, 1964.

17. Tomkins, Calvin. The Bride and the Bachelors. New York: Viking Press, Inc., c. 1965.

18. Turner, Margery J. New Dance: Approaches to Nonliteral Choreography. Pittsburgh: University of Pittsburgh Press, c. 1971.

B. Periodicals

19. Alenikoff, Frances. "Performance," Craft Horizons, August, 1972.

20. Angus, Sylvia. "It's Pretty, But is it Art?" Saturday Review, September, 1967.

21. Baker, Robb. "Frisbies and Unicycles Versus the Politics of Paternalism: The First Regional American Dance Festival," Dance Magazine, June, 1973.

22. Barnes, Clive. "Cunningham Choreography is Stunted," The New York Times, June 15, 1975.

23. Beiswanger, George. "New London: Residues and Reflections, Part Three," Dance Observer, January, 1957.

24. Beiswanger, George. "Doing and Viewing Dances: A Perspective for the Practice of Criticism," Dance Perspective 55, Autumn, 1973.

25. Bellow, Saul. "Machines and Storybook," Harper's Magazine, August, 1974.

26. Borek, Tom. "The Connecticut College American Dance Festival 1948-1972," Dance Perspective 50, Summer, 1972.

27. Chontos, Steve. "Computer Generated Dance," Pitt Alumni News, Spring, 1970.

28. Cohen, Selma J. "Merce Cunningham," Dance Perspective 34, Summer, 1968.

29. Copeland, Roger. "A Conversation with Alwin Nikolais," Dance Scope, Fall/Winter, 1973-74.

30. Davis, Douglas M. "Art and Technology--The New Combine," Art in America, January-February, 1968.

31. Devline, Sandra. "Alwin Nikolais," Craft Horizons, May, 1968.

32. Dufrenne, Mikel. "Art in the West: A Continuous Search for New Frontiers," The Unesco Courier, March, 1973.

33. Fishwick, Marshall. "What Modern Art Says About America," Saturday Review, April, 1966.

34. Flatt, Amelia. "Reintroducing Benjamin Harkarvy," Dance Magazine, November, 1972.

35. Gleuck, Grace. "Multimedia: Massaging Senses for the Message, New Mode of Communicating Uses," The New York Times, September 16, 1967.

36. Goldner, Nancy. "Dance," The Nation, May, 1972.

37. Hanahan, D. "Experiments in Movement," Saturday Evening Post, October 19, 1968.

38. Hering, Doris. "The $130,000 Anniversary Waltz," Dance Magazine, October, 1972.

39. Hering, Doris. "Performing Arts," Saturday Review, April 7, 1973.

40. Horviz, Robert J. "A Talk with George Kubler," Artforum, October, 1973.

41. Isner, Dale W. "PENELOPE--The Pitt Natural Language Processor," Reference Manual, The Computer and Data Processing Center, University of Pittsburgh, 1968.

42. Jowitt, Deborah. "Post-Judson Dance," Art in America, Spring, 1971.

43. Kirby, Michael. "The New Theatre," Tulane Drama Review, Winter, 1965.

44. Kirby, Michael. "Post-Modern Dance Issue: An Introduction," Drama Review, March, 1975.

45. Kluver, Billy. "Theater and Engineering--An Experiment," Artforum, February, 1967.

46. Kostelanetz, Richard. "Metamorphosis in Modern Dance," Dance Scope, Fall, 1970.

47. Lanni, Lawrence. "Science and Art as Forms of Communication," Arts in Society, August 18, 1969.

48. Lippincott, Gertrude. "Out of Old Contexts, Into New: The Schools and the New Dance," Dance Scope, Spring, 1970.

49. Lovell, Sir Bernard. "Serendipity in Science," Intellectual Digest, July, 1973.

50. McDonagh, Don. "Notes on Recent Dance," Artforum, December, 1972.

51. Madenfort, Duke. "The Arts and Relating to One Another in Sensuous Immediacy," Art Education, April-May, 1975.

52. Maynard, Olga. "Balanchine and Stravinsky: The Glorious Undertaking," Dance Magazine, June, 1972.

53. Maynard, Olga. "Cunningham on Campus," Dance Magazine, July, 1971.

54. Nickolich, Barbara E. "The Nikolais Dance Theater's Use of Light," Drama Review, June, 1973.

55. Nikolais, Alwin. "Basic Dance and Sensory Perception," Dance Observer, January, 1964.

56. Nikolais, Alwin. "Growth of a Theme," Dance Magazine, February, 1961.

57. Noll, A. Michael. "Choreography and Computers," Dance Magazine, January, 1967.

58. Noll, A. Michael. "Art Ex Machina," IEEE Student Journal, September, 1970.

59. Rockwell, John. "What's New," High Fidelity and Musical America, July, 1974.

60. Sarnoff, David. "No Life Untouched," Saturday Review, July 25, 1966.

61. Siegel, Marcia B. "Human Events," Dance Magazine, June, 1974.

62. Siegel, Marcia B. "Nik: A Documentary," Dance Perspectives 48, Winter, 1971.

63. Siegel, Marcia B. "The Omniloquence of Alwin Nikolais," Dance Magazine, April, 1968.

64. Terry, Walter. "Dancer's Space," Saturday Review, September 13, 1969.

65. Tobis, Tobi. "Nikolais and Louis: A New Space," Dance Magazine, February, 1971.

66. Tomkins, Calvin. "A Kind of Anarchy," Saturday Review, January 29, 1972.

67. Tomkins, Calvin. "Profiles: An Appetite for Motion," The New Yorker, May 5, 1968.

68. Toffler, Alvin and John McHale. "The Future and the Functions of Art," Art News, February, 1973.

69. Vaughn, David. "Diaghiev/Cunningham," Art Journal, Winter, 1974/75.

70. Williams, Peter. "Reviews," Dance and Dancers, April, 1951.

71. Zaripov, R. KH. "Cybernetics and Music," Perspectives of New Music, New Jersey: Spring-Summer, 1969.

C. Dissertations and Theses

72. Gambrell, R. J. "A Study of Some Principles of Esthetic Organization and Their Application." Unpublished PhD dissertation. Columbia University, 1970.

73. Gluck, Phyllis. "Recent Art and Its Discourse: A Study of Selected Movements." Unpublished PhD dissertation. Columbia University, 1971.

74. Gray, Winston. "The Dance Theatre of Alwin Nikolais." Unpublished PhD dissertation. University of Utah, 1967.

75. Kranz, Stewart D. "Art Technology and Visual Illusion." Unpublished PhD dissertation. Columbia University, 1969.

76. Myers, Martha Coleman. "A Study of Theory and Methods of Teaching Modern Dance Composition in Physical Education." Unpublished Master's thesis. Smith College, 1950.

77. Rowe, Patricia. "Identification of the Domain of Modern Dance Choreography As An Aesthetic Discipline." Unpublished PhD dissertation. Stanford University, 1966.

D. Unpublished Material

78. Beaman, Jeanne. Computer Dance Workbook. Unpublished manuscript.

79. Beaman, Jeanne. Personal correspondence, 1974-75.

80. Brown, Carolyn. Personal correspondence, 1975.

81. Choen, Selma J. Personal class notes--taken in Dance History course at Connecticut College School of Dance, Summer, 1967. (Handwritten.)

82. Noll, Michael. Personal correspondence, 1974.

83. Noll, Michael. "Computers and the Visual Arts." Speech presented December 1, 1972 at a joint meeting of National Council on the Arts and the National Endowment of the Arts' Advisory Panels.

E. Interviews

84. Carswell, Robert L., Station Manager of Instructional Television in Northwest Tennessee. Personal interview. Martin, Tennessee, August, 1974.

85. Westmoreland, James, Director of Computer Center, University of Tennessee at Martin. Personal interview. Martin, Tennessee, Summer-Fall, 1975.

F. Dictionaries and Encyclopedias

86. Apel, Willi, and Ralph T. Daniel. The Harvard Brief Dictionary of Music. New York: Washington Square Press, 1960.

87. Chujoy, Anatole, and P. W. Manchester. The Dance Encyclopedia. New York: Simon and Schuster, 1967.

88. Levy, Mervyn, ed. The Pocket Dictionary of Art Terms. Connecticut: New York Graphic Society, 1961.

89. Love, Paul. Modern Dance Terminology. U.S.A.: Kamin Dance Publishers, 1953.

90. Read, Herbert, ed. Encyclopedia of the Arts. New York: Meredith Press, 1966.

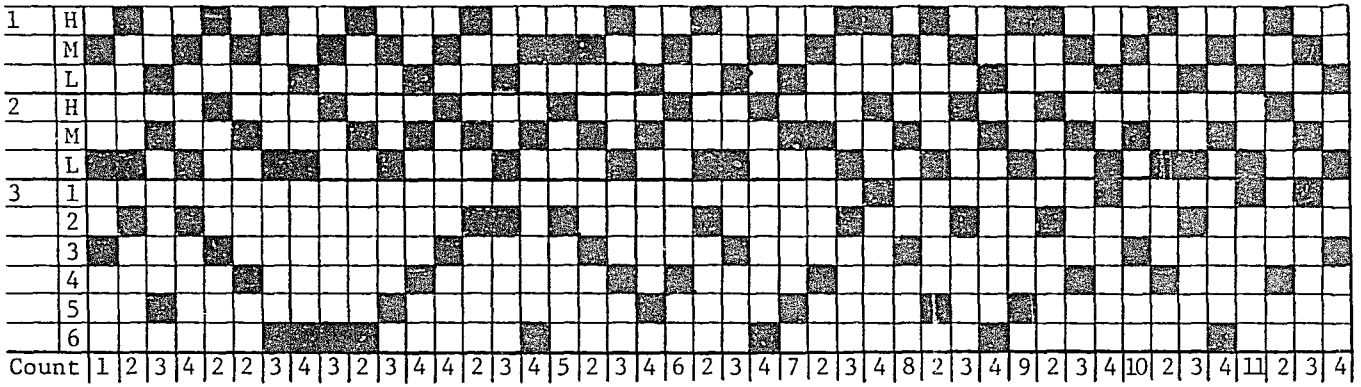
91. Urdang, Laurence, ed. The Random House Dictionary of the English Language. New York: Random House, Inc., 1968.

APPENDICES

APPENDIX A

AN EXAMPLE OF CUNNINGHAM'S TYPE OF DANCE SCORE, CHANCE CHART, INTERPRETATION, AND PROCEDURES FOR USING

CHANCE CHART



This chart illustrates a score similar to one which might be made in a Cunningham class. The score was achieved by using the method of tossing pennies, or passing it around the table at breakfast, lunch, or dinner and having the people fill in the squares.

Legend for Symbols

H = High

M = Middle

L = Low

Cunningham also knew Labanotation, and sometimes used these notation symbols:

= High

= Middle

= Low

Area 1 = Parts of the body, where:

H = Head, arms held up, etc.

M = Torso, middle of body

L = Legs, or lower part of body

Area 2 = Level of movement, where:

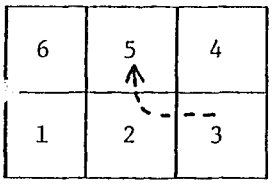
H = High level, such as jumps, leaps, etc.

M = Middle level, such as walking

L = Low level, such as crawl, rolls, etc.

Area 3 = Areas of stage, where:

1-6 =



Down Stage

INTERPRETATION OF CUNNINGHAM'S DANCE SCORE

Count 1. The dancer is using the torso, on a low level; might be interpreted as lying on his back, in Area 3 of the stage.

Count 2. High part (head), low level, Area 2 of stage; might be interpreted as rolls up to walk on hands into Area 2.

Count 3. Low level of body (legs), move middle level; might be interpreted as putting feet down and stepping into Area 5.

Etc., to end of score.

PROCEDURE FOR USING CHART

After working out what is to be done with these eleven counts, the dancers then work to make the eleven counts of material flow

kinetically, as in a phrase, to "give it the feeling of a phrase." All the dancers might perform simultaneously as Cunningham watches. He will call out, "John, hold! Ruth, stop! Jane, hold! John, go on!" etc. The dancers are to remember these stops and starts. Cunningham keeps working, watching the shifting scene, until he gets patterns that seem to "hang together" in space patterns, group patterns, dynamics, direction, etc.

Cunningham says things like "Decide why are you going toward Jane. Jane, why are you going away from John?" This creates meaning for meetings and departures, changes timing, dynamics, quality of movement, etc. This becomes part of the choreography then. Phrase patterns of different dancers overlap at times; other times they will be in unison. But once thing are worked out and set, they stay that way in the section. A section can vary from two minutes to twenty minutes in length. In indeterminate choreography, the order of the sections is changed or rearranged.

The example of Cunningham's type of dance score illustrated on page 177 can be much more elaborate by including more time values, qualities of movement, parts of the body, and the like.

APPENDIX B

PENELOPE: COMPUTER PROGRAM FOR STATIONARY DANCE

PENELOPE: COMPUTER PROGRAM FOR STATIONARY DANCE

```
          This PENELOPE program generates random dances.
          file is phrases(i,dataset phrases:txt,1,80,errors(exceptional)).
          integer variables are stage(x,x), place, dances, dancers, steps,
             new'place, i, j, k, l, m, r.
          alphameric variables are duration(x,x), movement(x,x), spacing
             (x,x).
          string variable is title.
start     redefine punctuation as , (p,1,p)  .(p,1,p).
          redefine period as '.'2  ','2.
          open phrases.
          read movement from phrases.
          read duration from phrases.
          read spacing from phrases.
          close phrases.
          write 'What is the title?' on PO.
          read title from PI.
          write 'Give me the stage freedom.' on PO.
          read stage from PI.
          write 'Give me the number of dances, dancers, steps.' on PO.
          read dances dancers steps  from PI.
          write 'Give me a random number.' on PO.
          read r from PI.
          redefine random with r.
          for i = 1,1,i>dances do for j = 1,1,j>dancers do execute dance,
             end.
dance     set r = random'loc of stage.
          set place = stage(r,1).
          write 'R A N D O M   D A N C E S' # on(20,80) PO(2).
          write '-------------------------' # on(20,80) PO.
          write 'DANCE' i on(5,15) PO.
          write title on (25,40) PO.
          write 'DANCER' j ' AT' place # # on (50,80) PO.
          for k = 1,1,k>steps do execute line,  return.
line      for l = 1,1,l>length of stage do execute look,   a.
look      if place .e. stage (1,1),  else return.
          set m = l.
          set l = length of stage,  return.
a         set r = random'loc of stage(m).
          if r .c. 1,  a.
          set new'place = stage(m,r).
          write k on PO.
          if place > 9,  off.
          if new'place > 12 .and. new'place < 16 then write 'Exit rear,'
             on PO,  exit.
          if new'place > 9 then write 'Exit side,' on PO,  exit.
          if new'place .e. place then write 'Stay at' place ',' on PO,
             exit.
          write 'Go to' new'place ',' on PO,  exit.
```

```
off     if new'place .e. place then write 'Stay off,' on PO,  exit.
        if place > 12 .and. place < 16 then write 'Enter rear,' on
           PO, exit.
        write 'Enter side,' on PO.
exit    set place = new'place.
        write random of duration on (5,72) PO.
        write random of movement on (5,72) PO.
        write random of spacing  # # on(5,72) PO.
        program begins at start.
>
```

APPENDIX C

SELECTED 16 MILLIMETER FILMS OF CHOREOGRAPHED WORKS BY ALWIN NIKOLAIS, MERCE CUNNINGHAM, AND JEANNE BEAMAN

SELECTED 16 MILLIMETER FILMS OF CHOREOGRAPHED WORKS

Alwin Nikolais (Multimedia)

1. Alwin Nikolais. WCBS. Repertory Dance Workshop Films. WCBS, WCBS-TV, 51 W. 52nd Street, New York, N. Y. 10019.

2. A Time to Dance. (A series of nine programs moderated by Martha Myers, in which program three focuses upon Invention in Dance--Nikolais and Company.) 29 minutes each. Black and white with sound. 1959. National Educational Television Center, 2320 Washtenaw Avenue, Ann Arbor, Michigan.

3. Dance and the New Media. Black and white, 29 minutes. Contemporary Dance Series, University of Michigan Television Center, 400 South Street, Ann Arbor, Michigan.

4. Fusion. Color and sound, 15 minutes. 1967. Ed Emschwiller on Nikolais dance. 1967. Schoenfield Film Distributing Corporation, 165 West 46th Street, New York, N. Y. 10036.

5. Limbo. Color and sound, 30 minutes. 1968. WCBS, WCBS-TV, 59 W. 52nd Street, New York, N. Y. 10019.

6. Totem. Color and sound, 16 minutes. 1965. Grove Press, 53 East 11th Street, New York, N. Y. 10003.

Merce Cunningham (Chance/Indeterminacy)

1. Merce Cunningham. Black and white with sound, 13 minutes. 1964. Excerpts from Antic and Story. University of Illinois, Visual Aids Service, 1325 South Oak Street, Champaign, Illinois 61820.

2. Rainforest. Black and white with sound, 19 minutes. 1967. Pennebaker, Inc., 56 West 45th Street, New York, N. Y. 10036.

Jeanne Beaman (Computer)

1. Stationary Dance. (Computer generated duet choreographed by Jeanne Beaman.) Black and white with sound, 2 minutes. 1965. Jeanne Beaman, Penryn Lane, Rockport, Massachusetts 01966.