

Joan F. Hays

MODERN DANCE

A biomechanical approach to teaching



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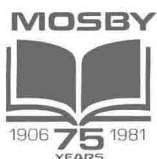
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MODERN DANCE

A biomechanical approach to teaching

To my parents

Elberta and Murl Francis

who were my first teachers and
my constant encouragement

PREFACE

Dance is a difficult subject about which to write. To describe a movement or exercise so that time, space, and energy are all explicitly detailed, and to allow the reader to correctly translate the words into an accurate reproduction of the original movement is both challenging and impossible. To develop a specific formula that would create “the complete dancer” or “complete dance teacher” is also impossible. Therefore the purpose of this book is to offer some general hints and observations about the teaching of dance that have been useful for me over the past 20 years. I also wish to chronicle the specific techniques designed and used by Erick Hawkins, the internationally renowned choreographer and teacher, in his New York studio and in various residencies throughout the United States. It is hoped that this information will help the new dance teacher and provide new ideas for the experienced dance teacher.

Within the scope of this book, then, will be guidance for the inexperienced teacher of dance in planning and developing lesson and unit plans for use in dance classes in the secondary schools as well as in colleges and universities. There will also be descriptions of many exercises and dance techniques used by Erick Hawkins, with specific information about how to teach, analyze, and correct those exercises. It is my hope that with this information more people will have the op-

portunity to become familiar with the unique, alternative approach to training dancers that has been introduced by him. The goals and purposes of each exercise or movement combination, as well as the goals of the overall approach to dance, will be discussed in some detail throughout the text.

For the past 8 years I have been in a teaching situation where these techniques, based on Todd's *The Thinking Body* and developed by Erick Hawkins, have been taught exclusively. The skill level of dance is high, the motivation of the students is impressive, and the response of colleagues has been overwhelming. For these reasons my goal has been to develop a text that will allow the readers to begin to understand and to teach this technique, encouraging them to develop the ideas to suit their own needs, and at the same time to offer a reference to answer those inevitable questions that arise when one is experimenting with something in which one might have little first-hand experience. The ultimate goal is for readers to glean whatever might be helpful and valuable for themselves from this book, and then apply what is useful in their own teaching or performing situations without thinking that patterns must be reconstructed perfectly. Readers should take the concepts and ideas and create their own working dance situation.

I am deeply indebted to many people who

have aided greatly in the preparation of this book. However, the responsibility for accuracy of any material included is exclusively mine. The greatest thanks must go to Erick Hawkins, who spent many class hours making the concepts and exercises included in this book clear and useful. His willingness to allow me to participate in all levels of his technique, both in his classes and in classes taught by his company members during several summer residencies over the past years, has made this book possible. A great debt of gratitude is also owed Lucia Dlugoszewski, noted American composer, whose insight into the use of time and dynamics as tools for dance and dance choreography is unique. Her continued kind and gentle artistic guidance has been an inspiration. I wish to acknowledge my indebtedness to Dena Madole, who first introduced me to the dance technique chronicled herein. Special thanks are also due many others. Don Anders' careful preparation of the photographs has aided

immeasurably in the clarity and usefulness of this text. Le Anne Smith, a student and colleague, posed tirelessly for the photographs. Dr. Elizabeth R. Hayes of the University of Utah Dance Department guided my first academic experiences in dance. Mary Fee, of the University of Wisconsin encouraged my early scholarly attempts in dance. The Faculty Senate and the Department of Physical Education of Southwest Texas State University made it possible for me, through a developmental leave, to initiate this project. The countless students and colleagues who have encouraged and believed in this project and the many people involved in the actual preparation of the manuscript are gratefully acknowledged. Special appreciation is due my husband, Dr. Al Hays, and my daughter, Cassandra, who have done without me so that this book might be.

Joan Francis Hays

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Chapter 1

DEVELOPMENT OF THE BIOMECHANICAL APPROACH TO DANCE

INFLUENCE OF ERICK HAWKINS

For those who have seen dance performed by current or previous members of the Erick Hawkins dance company, it is apparent that something different is happening in dance. Many dance companies have a unique or distinctive style, something that marks the movement as theirs. Most, however, can trace their technical backgrounds to the ballet and/or some derivative of Martha Graham's contraction-release principles.

Erick Hawkins can also trace his beginnings back to the ballet (Balanchine) and standard modern dance (Graham). Yet both of these dance techniques seemed to be inadequate for Hawkins' vision of dance. With the aid of Mabel Ellsworth Todd's book, *The Thinking Body*,² and his own intelligence and intuition, he began to develop a different dance technique, not just a different dance style. This new technique attempts to use the inherent structure of the human body as efficiently and effectively as possible to develop strong, skillful dancers who can work with their bodies' neuromuscular patterns rather than against them. In other words, his goal was to develop a dancer that is the kin-

esthetic ideal rather than a deformed perversion of the human body.

Dancers did not accept the new technique quickly, since most of them had been in traditional dance training for many years. Learning this new technique would mean totally revising their thinking and dancing. However, in terms of the human neuromuscular mechanism, every one of the old movement patterns could be shown in theory and practice to be less valuable than the Hawkins technique.

Another problem with acceptance of the technique was that at first it seems too easy. Dancing in this new way, however, is as hard as any technique, but in early classes the teacher has to make a conscious effort to break old movement habits and postural patterns and to help the dancer become tuned in to the body as it moves. This requires a period of gentle coaxing that makes classes seem slow, relaxed, and painless at first. Dancers will soon discover that each exercise is designed to fit the way joints are structured and the way muscles are designed to work across those joints. Furthermore, they will realize that the Hawkins technique is an

attempt to relate the desired movement patterns to the realities of the human body.

HISTORICAL AND CURRENT MISCONCEPTIONS

For several hundred years the dancer, the student of dance, and the teacher of dance have accepted the erroneous idea that dance movement is superimposed on the body from without. Certainly we have recognized that it is the dancer who must do the moving, do the actual physical effort that is dance. However, the movement that we have tried so hard to train for is, in fact, an intellectual idea left over from the sixteenth century. That idea was based on a love of the orderliness of mathematics rather than a true knowledge of the human body. In addition, the ideas of what dance should be and look like developed during a time when the arts were developing superficial decorative characteristics (baroque and rococo), and these characteristics were hung on dance art and the dancer like a suit of hand-me-down clothes with just a few tucks and a small hem to make the garment seem to fit.

Until Isadora Duncan broke from that accepted idea of stiff, mechanical movement in which the legs and arms functioned like isolated pistons, dance as a performing art was stagnating, actively trying to remain what it had been two centuries before. Isadora dazzled the world with a vision of dance that was not superficial, in content or in movement. Unfortunately, she did not have time to realize her dream of training a youth who could dance about important things for a general audience rather than dancing about fairy tales for the aristocrats and elite. Her dream was young people who could move with the full potential of the human body rather than like stiff, pretty, windup dolls. She did, however, make an initial dance statement that would allow later dancers to begin looking for a new, more pertinent, more human, and

more humane way to dance. The people who followed her made great sacrifices and great efforts to bring to the American people, and to the world, a meaningful, artistically mature dance. In some ways they succeeded remarkably. In other ways they still fell far short of the mark. This was especially so in the way most dancers, both in ballet and in modern dance, tended to accept the early ideas of how a dancer and a dance should look. The concept that the dancer was somehow defying the laws of nature when he jumped, balanced, stood, or turned has never been completely erased. The modern dancers had an opportunity to overcome that idea because their dance art was not handed down to them from the European court society of previous centuries. Unfortunately, the new dancers allowed themselves to be intimidated into thinking that they had to be as strong technically as the ballet dancer and into misinterpreting that to mean that they had to look like a ballet dancer except for the bare feet. What nearly everyone missed was the real message of Isadora and of the contemporary arts movement: that dance and the arts are things of the senses and were created by and for human beings rather than by defying and negating the senses.

Probably the most insidious idea was that the dancer somehow defied gravity and the laws of nature when, in fact, the most skilled dancer has learned how to work with and to use those laws of nature (physics), whether those ideas were openly introduced into training or an individual dancer intuitively used those laws. How characteristic of the human animal to assume that his parading and posturing were somehow in defiance of nature, thus proving that he was, in fact, the ruler of nature.

As a result of these misconceptions, these cultural and artistic hang-ups, dancers have consistently ignored the reality of the human body and how it moves most efficiently and

effectively. Dance has become not an art form of movement, but rather, an art form made up of a series of static poses; not an art form of meaningful human movement expressing ideas or emotions, but a series of mechanical virtuoso tricks; not an art form celebrating the senses of humans but an art form negating those senses. Yet, how is the artist or the spectator to appreciate any art form unless it is through the senses? Does this mean that those long-distance senses, sight and sound, are to be allowed the opportunity to revel in their sensuousness in music, painting, and sculpture but that the most personal and intimate sense of our own physicality, the kinesthetic sense, is to be denied as a means of communication and of art? Is the human body so feared that in dance it is treated as some remarkable, mechanical, defiant machine, rather than a beautiful, muscular animal capable of moving with exceeding skill and breathtaking power while giving in to and using the laws of gravity and the physical universe?

To overcome the artificiality of current dance trends, teachers will have to begin by looking closely at the way we train our dancers. Surely it must be obvious that dancers dance the way they do because the habits of movement have been imposed on them day after day, year after year in the dance studio.

TEACHING DANCE AS A HUMAN ACTIVITY

Many teachers of dance, especially in the academic situations, have had some background in anatomy, physiology, and kinesiology. Without these areas of knowledge, teaching dance is a little like trying to teach painting without knowing anything about color. The dancer's artistic medium is the human body in motion. Therefore a thorough understanding of the body would seem desirable and even essential. Unfortunately, even those who have a background in these areas

have often chosen to use the concepts only when it suits and to rely on the same old techniques of "teaching as we were taught," without question, when it is convenient.

In recent years a great deal of research has been done in the area of exercise physiology that might have an important bearing on dance. Mostly, however, dancers and teachers of dance seem willing to overlook anything that might make a major change in methodology and continue teaching the same old things, assuming, as much of the educational system does, that if an Einstein or an Olympic athlete or an outstanding dancer emerged from a program, that success must be a result of the program and not in spite of it.

Perhaps one of the great obstructions to changes in the teaching of dance has been that most kinesiology classes have been geared for sports activities rather than dance, and that the tendency is to study the more specific sports skills rather than exploring the basic generalities of correct movement. An early kinesiology book, *The Thinking Body*, although written in 1938, seems to be more pertinent about the basic requirements of how the human body must generally move than is any current text.¹ In this book the real importance of the spine and pelvis and the mechanisms for support and initiating human movement were clearly stated. Since that time, kinesiology texts have been more concerned with the extremities and have lost sight of the fact that the most critical joints in human movement are the joints in the lumbar spine. These joints are almost universally misused in dance as well as in most athletic activities and are almost totally ignored in the training and in the literature. Lower back problems are a major physical disability among dancers,¹ and yet our physical activities, be they dance, athletics, or sports, do little to strengthen this area and often do a great deal to add to the problem.

For example, training for dance and for many sports activities has placed great importance on developing strong abdominal muscles and strong thigh flexors (quadriceps femoris) and extensors (gluteal muscles). Granted, these are important muscles and should be strong. However, training has frequently overlooked potentially powerful muscles, the iliopsoas, and the quadratus lumborum, that flex the thigh socket, help to support the pelvis, flex the lumbar vertebrae and change the tilt of the pelvis. At the same time, these activities, if not actually encouraging a hyperextended lower back, allow it to exist with little or no attempt to correct it.

Dance training has frequently encouraged supporting the alignment of the spine and pelvis (posture) by the spinal extensors (muscles on the posterior aspect of the spine). These long, rather thin muscles were intended for moving (extending) the spine rather than supporting it. The iliopsoas and quadratus lumborum muscles are designed to help align and support the pelvis and spine with the help of ligaments and the abdominal muscles. This support, in turn, frees the muscles of the upper back and ribs for refining movement patterns of the spine and shoulder girdle. The iliopsoas can also move and support the leg at the thigh socket effectively, allowing greater control of the whole leg.

Additionally, training that encourages unnecessary tightening of the back and shoulder muscles creates tensional patterns that interfere with the visceral functions (breathing and circulation) at the least, and also creates incorrect postural habits that will ultimately lead to chronic postural discomfort and possible injury.

An example of this common but detrimental posture is the general concept of standing up straight. Supposedly, to "stand up straight," one must throw back the shoulders and thrust the chest forward. This tightens the

muscles in the back and shoulders and forces the rib cage and shoulder girdle into a position that interferes with easy breathing. The spine is arched backward so that the lumbar vertebrae are hyperextended and the weight of the shoulders is back of the postural axis. This causes unnecessary tension in back muscles and places a strain on the muscles and ligaments around the lumbar spine because the weight of the upper body is now supported by those muscles and ligaments rather than balanced "bone on bone." In fact, the expressions "stand up straight" and "throw your shoulders back" are mutually exclusive terms. Such posture makes it difficult for the large muscles in and around the pelvis to support the pelvis and to let the legs function efficiently. Yet it is not uncommon for dance teachers to encourage this misalignment as a part of the proper posture for a dancer.

Another problem frequently encountered in the current training of dancers is the encouragement of a sense of rigidity in the torso, the arms, and the legs by locking them into position. There seems to be an attitude of virtuousness in working very hard with all the muscles as tense as possible all the time. This is, in fact, a waste of energy and is detrimental to the most efficient and smoothest movement. An athlete knows that the longest throw or the highest jump will come as a result of using the collective momentum of all of the joints in the skeletal system in a sequence rather than all at once. It is time that the dancer learns that by locking half the body into a rigid position, much of the available energy and momentum for movement will be lost.

People have always thought of dance as being graceful when, in fact, it is often static, tense, and artificial. They are, in turn, enchanted by the jump of the basketball player whose body seems to rise loosely into the air, land softly, and move away as the ball swishes through the hoop. People frequently use the

efficient and powerfully soft movement of the cat as an example of the utmost in grace. This is no artifice, no rigid posturing, but beautiful, efficient, graceful movement. The dancer can, through good training, have the animal grace of the basketball player or the cat with the desired esthetic form of dance and be the ultimate dancer.

The dancer and the dance teacher must stop hiding behind the fact that dance is an art form, and therefore not concerned with science, and become actively involved in the science of human movement. Then, and only

then, can dance training be rigorous and at the same time intelligent about what the goals of dance can and should be. If robot dancers are desired, then let the robots be invented. If human dancers are desired, then the structure of the human body must be understood and dance be made an intensely human activity.

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1. Sweigard, L. E.: Human movement potential, New York, 1974, Dodd, Mead & Co., p. 261.
2. Todd, M. E.: The thinking body, Brooklyn, 1975, Dance Horizons (reprint).

Chapter 2

BASIC CONCEPTS

When beginning to teach dance from a biomechanical point of view, the teacher must often reevaluate the desirable characteristics most basic to the dancer. Among those basic concepts are postural alignment, turn-out of the legs and feet, correct use of joints, muscular contraction and decontraction, and basic neuromuscular coordinations that are common to most movements. This chapter will introduce and discuss many of the “nuts and bolts” of basic dance technique, and this information will be essential to the use of the material developed throughout the rest of the book.

ALIGNMENT CONCEPTS (OR HOW TO BEGIN BEFORE BEGINNING)

Although dance teachers and athletic coaches constantly advocate good posture and correct placement of body parts for efficient and effective movement, in many instances misconceptions, for various reasons, exist. Many of these misconceptions are so deeply ingrained in our teaching thought and methodology that they have become accepted and proliferated in everyday life by parents as well as coaches and teachers.

One of the most insidious of these misconceptions follows the military postural commands to “throw the shoulders back, lift the chest, and lift the chin,” as a way of telling people to stand up straight. These three commands are mutually exclusive of good

posture and actually do more to create poor, unhealthy, and ultimately dangerous posture than they do to improve it. The posture of the upright human should depend on the alignment of the spine and on the way it transmits the weight of the head, arms, and torso to the pelvis; the alignment of the pelvis on and the transference of weight to the heads of the femurs; and the alignment of and transference of the weights through the legs to the feet. An important idea to keep in mind when talking about postural alignment is that the weights are being supported to a great extent through bones and the bony junctures, joints. Each bone is designed to support and transfer weight in a fairly specific structural manner through the joints. The muscles attached to the bones and surrounding the joints help to maintain an upright posture, but where bones can be used to support and muscles used to modify, a more efficient alignment can be attained.

For ease of breathing and movement, the rib cage should hang from the spine, the shoulder girdle should hang above and around the rib cage and spine, and the head should balance on the top end of the spine.^{5, pp. 87-102} The common commands for posture do not allow a restful hanging of body parts, but instead demand that muscular energy be used to hold these body parts in positions behind the central axis of the body (spine). This creates tension and requires muscular effort,

which in turn makes those body parts less capable of fulfilling their normal functions comfortably and efficiently. For example, the thrusting up of the chest and pulling back of the shoulders redirects the angles of support for the major body weights on the vertebral bodies and the spinal discs by increasing the curves of the spine. As a result, the bony column of the spine becomes less capable of supporting those weights without stress to spinal discs, ligaments, and muscles. That chronic stress, continued over a period of time, can lead to pain and/or injury.

One should begin by looking at the spinal column as the supporting structure for the weights of the upper body (Fig. 2-1). The spine is made up of 33 or 34 vertebrae, each of which is approximately as wide as it is deep. The vertebrae broaden and thicken progressively toward the base rather like an elongated pyramid and at all levels occupy a space of about one-half the diameter of the body from back to front.^{5,p.82} When they are viewed laterally, the gentle S-shaped curves are apparent. It has been my experience that dancers rarely have taken time to get a clear mental image of where their spine is in the body, its actual size, function, and mobility (or lack of mobility). Once a clear image of the spine is achieved, most movement skills can be related to how they affect the spine or are affected by the movement of the spine.

The seven cervical, twelve thoracic, and five lumbar vertebrae comprise the mobile segments of the spine, whereas the five sacral and four to five coccygeal bones form the lower fused segments. The composite curves of the spine and the different characteristics of the vertebrae in each section of the spine allow for an efficient transference of weights from each section to the preceding section when these various body weights are correctly balanced over one another. When the vertebral ligaments are allowed to support the spine in correct alignment, minimal mus-

cle action will be required to maintain upright balance and easy weight transference. If the vertebrae are misaligned due to incorrect concepts of posture and continual misuse of the inherent bony and ligamentous structures, the tonus of the supporting ligaments will change (stretch or shorten) to accommodate that misalignment, creating the need to use muscles, originally intended to move the spine, to support it instead. In addition, the vertebral bodies that were designed to accept and balance the weights at a certain angle chronically have to accept the weights at a less advantageous angle, thereby subjecting the connections between and around those vertebrae to an abnormal amount of shearing stress.^{5,p.48} The resulting stress on the joints and ligaments, plus the continuous hypertension of muscles called on to support those joints, if habitual, can create chronic problems such as muscle spasms, backaches, or pinched nerves. The stress also increases the possibility of a major back injury when the body is forced into an unusually difficult physical situation such as landing badly from a leap or trying to lift a heavy load. It is even possible for injury to occur in an apparently normal situation simply because the continued stress has become intolerable over a period of time.

The lower back (lumbar vertebrae) and the knees are the most vulnerable joints of the body in terms of dance and athletics. One of the best ways to help guard against either chronic or acute injury at either site is to learn to correctly align the bony structure in such a way that the weights of the body can be transferred to the floor or other supporting surface. This allows the musculoskeletal system the mechanical advantages available to it, and at the same time, frees muscles that are often used to work at something they were not originally intended to do so that they can be used in their original capacity. The freeing of muscle tensions and the re-

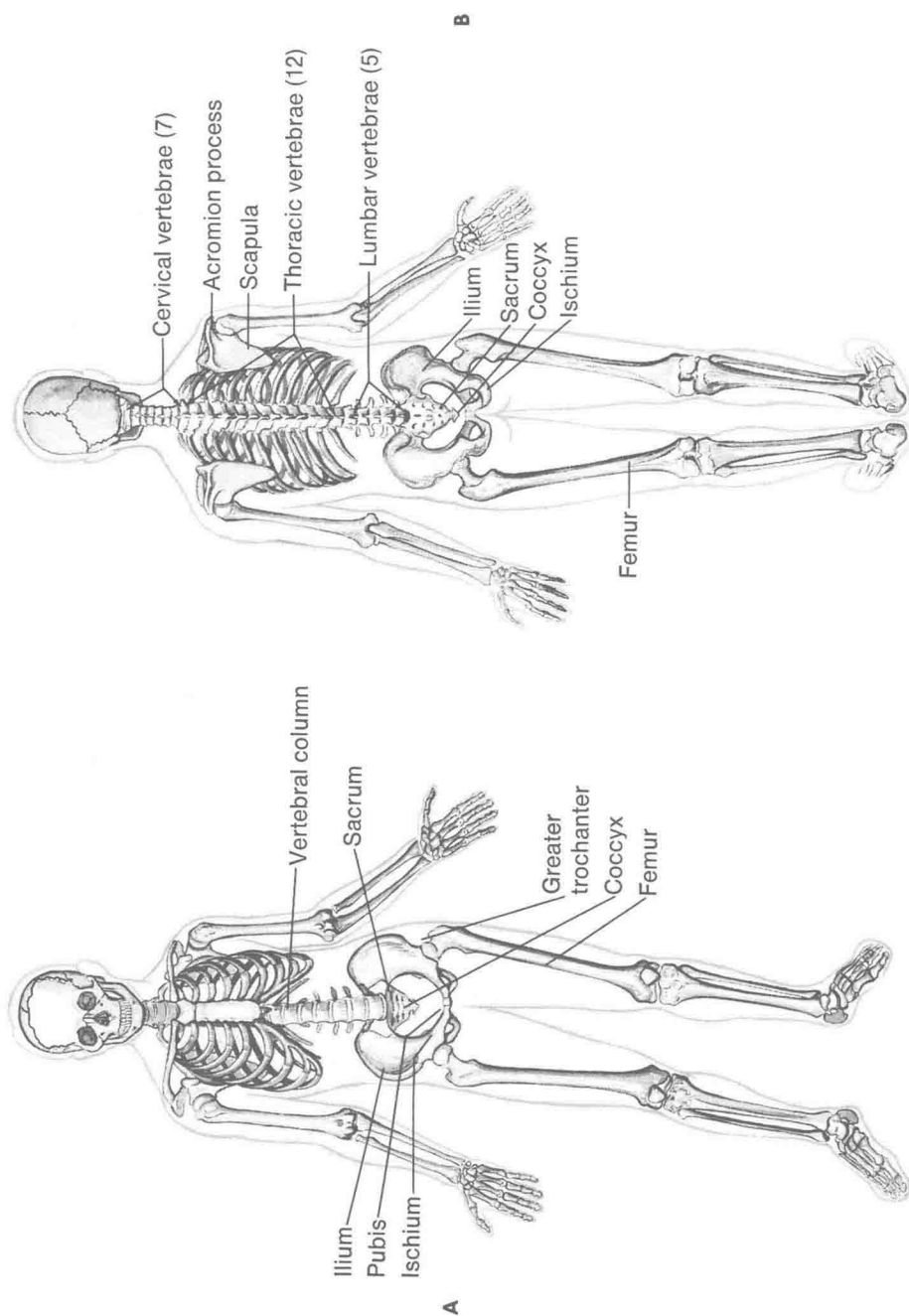


Fig. 2-1. Anterior (A) and posterior (B) views of skeleton. (Modified from Anthony, C. P., and Kolthoff, N. J.: Textbook of anatomy and physiology, ed. 9, St. Louis, 1980, the C.V. Mosby Co.)