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Revisiting Vsevolod Meyerhold's Biomechanics:

Challenges for Directors and Actors in Theatre Today

RETOUR SUR LA BIOMECANIQUE DE MEYERHOLD:

DEFIS POUR LES REALISATEURS ET LES ACTEURS DU THEATRE D'AUJOURD'HUI

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Abstract: Despite the popularity of Vsevolod Meyerhold's biomechanics in theatre practice, his lofty ideas have unfortunately not satisfied the yearnings of directors and actors all over the world. His discourse directs actors to accomplish complex movements like gymnastics, acrobatics, ballet, and circus movements without educating us on the human anatomy and the influence of the laws of mechanics on motion. These factors constitute the foundation upon which biomechanics rest upon. The purpose of this study is to create the awareness among the young and aspiring directors and actors on the challenges of the laws of mechanics in theatre practice. Consequently, this study believes that if Meyerhold's biomechanics must be properly applied in theatre practice, then, young and upcoming directors and actors must be knowledgeable in the simple mechanics of motion to guarantee effective and efficient movements, movement pattern and movement combinations on theatre stage and screen.
Key words: Meyerhold; Biomechanics; Challenges; Directors; Theatre

Résumé: Malgré la popularité de la biomécanique de Vsevolod Meyerhold dans la pratique théâtrale, ses idées hautes n'ont malheureusement pas satisfait les aspirations de réalisateurs et d'acteurs du monde entier. Son discours dirige les acteurs à accomplir des mouvements complexes comme la gymnastique, l'acrobatie, le ballet, et les mouvements de cirque sans leur faire connaitre l'anatomie humaine et l'influence des lois de la mécanique sur le mouvement. Ces facteurs constituent le fondement sur lequel se base la biomécanique. Le but de cette étude est de créer une prise de conscience parmi les futures jeunes réalisateurs et acteurs sur les défis des lois de la mécanique dans la pratique théâtrale. Par conséquent, cette étude estime que

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si la biomécanique de Meyerhold doit être correctement appliquée dans la pratique théâtrale, alors les futures jeunes réalisateurs et acteurs doivent être informés de la mécanique simple du mouvement à fin de garantir l'efficacité et l'efficience des mouvements, les types de mouvements et les combinaisons de mouvements sur la scène de théâtre et sur l'écran.
Mots-Clés: Meyerhold; biomécaniques; défis; réalisateurs, théatre

INTRODUCTION

It is truism that theatre is an interdisciplinary studies. Perhaps, this is among the reasons why many theatre scholars, critics, theoreticians, directors and actors have explored other disciplines like natural and physical sciences, management science, political science, philosophy, and law to mention some. Principally, to borrow varied theories, concept and training techniques to form the nucleus of new thinking that have advanced the realization of theatre scholarship and practice globally.

Vsevolod Meyerhold, in my opinion, is one of those radical thinkers who have explored natural science and exhuming from its base, refined ideas that help him to develop the theory of biomechanics and constructivism, to meet artistic finesse. Perhaps his lofty ideas have influenced theatre practice but have unfortunately, not been able to satisfy the yearning of actors and directors all over the world. Arguably, Meyehold's biomechanics is still being advanced and practiced or experimented, it has continued to pose serious challenges to the directors and actors in theatre today. There is need for the young and upcoming directors and actors to learn, understand or better still, appreciate and apply properly Meyerhold's biomechanics in theatre practice.

Within the context of this understanding, let us re-examine Meyerhold's biomechanics principles in theatre, biomechanics principles and movement in physical education, the simple mechanics of motion and its implications for theatre, with a view to proselytizing directors and actors in theatre today.

1. VSEVOLOD MEYERHOLD'S BIOMECHANICS THEORY IN ACTING

Vsevolod Meyerhold, a Russian dramatist, and an avant-garde theatre director, is universally acknowledged for articulating biomechanics and constructivism principles of acting in theatre. He is considered as an experimentalist in theatre who built theatre studio where he experimented geometrically pattern of movement, improvisation and rhythm techniques that has shaped and reshaped theatre practice. The end product of this theatrical conceptualization and long experimentation was the birth of unique acting techniques, namely, biomechanics and constructivism. Oscar Brockett acknowledges Meyerhold's contributions to theatre (drama) when he asserts:

> *Between 1910 and 1914, Meyerhold also established studios where he experimented with circus and commendia dell' arte techniques. In one studio, the entire auditorium was treated as a performance space which intermingled actors and spectators. Actors evolved their own scripts and experimented with geometrically patterned movement, improvisation and rhythm. Meyerhold also began to turn the science background into a mere apparatus for acting a collection of steps and levels. Meyerhold was the first important director to believe that the director is the major creative force in the theatre and that a script is simply material to be moulded and reworked as the director wishes (451-452).*

Of greatest interest to us is Meyerhold's biomechanics (Approaches to acting). His concept of biomechanics was experimented and perfected for nine years. Meyerhold's biomechanics places specific emphasis on acting and proselytizing directors to train performers in proportion to the machine age. His principles considered the actor as a laboratory tool and a burden that must be polished and manipulated to achieve faster and better performances on theatre stage. Moreso, the principle places emphasis on the physical form of the actor rather than the content of the play, the director who is the master craftsman must adhere strictly to the rule (Brockett 480). Meyerhold's biomechanics further professes that all actors willing to take part in theatrical performances must be ready to assume the form of a marionette. Meyerhold had mooted the idea of the actor being replaced by a cabotinage, a team he developed to refer to a robot-like kind of mine actor, who must use their bodies to reveal specific and refine aspect of emotion. He emphatically declares:

> *The cabotin is a strolling player. The cabotin is a kinsman to the mine, the historian, and the juggler; the cabotin can work miracles with his technical mastery; the cabotin keeps alive the tradition of the true art of acting (Roose Evans cited in Stephen Inegbe, 2005).*

Meyerhold's biomechanics therefore argues that for actors to get their desirable emotions and joy, as well as to achieve desirable responses from the audience (spectators), there is need for them to accomplish appropriate and apt kinetic pattern and concept.

To this end, performers must endeavour to accomplish acrobatics, gymnastics and ballet maneuvers and circus movements. Meyerhold insists that it would be more efficient and convenient for performers to plummet down a slide, swing on a trapeze, or turn a somersault, than to restrict themselves to behaviour considered appropriate by traditional social standards. This is a variation of James Lange's theory which professes that particular pattern of muscular activity elicit (stimulates) particular emotions (Brockett 480). Meyerhold had evison a theatre where actors would rely less on text, where audiences should be encouraged to be imaginative, and be part or contributor to the process of creativity (Inegbe, 121). Meyerhold's biomechanics also emphasizes on physical training and exercises. Because acting is mechanistic, Meyerhold postulates that actors should be rigorously trained, in order to make them as efficient as machines in carrying out acting roles on theatre stage. It emphatically implies that a performer must be physically and rigorously trained to acquire specialized skills that would enable him assume or perfect the role of a robot, specifically, in accomplishing stylized and symbolic movements, namely gymnastic, acrobatics, ballet maneuvers and circus movements. To this end, it is convenient to reason that physical exercises, gymnastics, acrobatics, ballet and circus movements constitute the fundamentals of Meyerhold's biomechanics principles in theatre.

However, an x-ray review of a Meyerhold's biomechanics principles reveals some deficiencies. Arguably, his discourse directs actors to accomplish kinetic pattern without educating us on human anatomy and the forces acting upon actor's movement and the result such forces produced. Interestingly, the human anatomy and the forces (laws of mechanics) acting upon human motion are the foundation upon which the biomechanics approach rest. In the light of this reasoning, let us reconsider the biomechanic principles of human movement in physical education.

2. BIOMECHANICS IN PHYSICAL EDUCATION

Fundamental researches in biomechanics in physical education indicate that the athletic coach, the physical educator and physical education researchers have developed keen interest in the application of biomechanics principles and movement in the areas of sport, dance, and designed exercises. Historically, the principle of biomechanics of human movement is adapted from kinesiology. The term 'kinesiology' is defined as the scientific study of human movement. It involves two distinct but related phrases, namely: the human anatomy and the application of the laws of mechanics and physics to the movements and related actions of the human body, especially in areas of sport, dance, and designed exercises (Nixon and Jewett, 168-169). Thus, there are two areas or components of biomechanics. The first is the

biological aspect of which is based on functional anatomy. The second emphasis is on mechanical factors involved in human movement. Perhaps, these principles may have influenced John N. Northing, Gene A. Longman and Wayne C. McKinney's conceptualization of biomechanics; adding, studying and analyzing humans in action, sport object motion, and forces acting upon these animate and inanimate bodies (3). Charles Butcher vividly articulates this argument when he asserts that biomechanics therefore is the study of the various forces that act on the human body and the efforts such forces produced (Afuekwe, 209).

Based on this understanding, adherents of biomechanics principles and movements in physical education argue that all human movements are stimulated within the limitation of muscles, skeleton, neural and cardiovascular system complexes. In human movement, the muscles provide the power and force, and when acted by levers of the skeletal system provides an unlimited number or variety of skills for efficient and effective movements (Afuekwe, 205).

As regards to the second area of biomechanics, namely; the mechanical factor, proponents of biomechanics principles of human movement in physical education profess that all human movements are governed by the laws of mechanics (physics). It implies that, there are forces that act upon human motion with effects produced. Charles Butcher puts this argument more forthnightly when he assets;

Principles of biomechanics in sports and physical education are concerned with factors such as velocity, acceleration, force, torque, energy, power, momentum, stability, motion, aerodynamics, and hydrodynamics (cited in Afuekwe, 209-210).

Jerry D. Wilson and Anthony J. Buffa express this principle concisely when they assert that the movement of any implement is under the influence of the laws of mechanics like motion, gravitational force, force, friction, stability to mention some (32). It invariably means that the movements of actors on theatre stage and screen are governed by the laws and principles of physics or mechanics. Because an actor's movement like other human movements is under the influence of the laws of physics or mechanics, it is right for the young and upcoming directors and actors to be guided to enable them accomplish effective and efficient movements on stage and screen. It is in the light of this that Nixon and Jewett's theses become particularly applicable;

All teachers and coaches need to be well acquainted with selected, fundamental generalization from biomechanics that have application to the effective teaching of correct performances of physical skills, as well as prompt identification of errors by performers, as a basis for future direction (169).

They further add;

Understanding and appreciation of human movement should include knowledge of the principles of human movements and the ability to apply these principles in sound body mechanics in daily movements, in participation in physical recreation activities, and in learning new works or leisure skills. It encompasses the ability to use movements as expressive and communication medium (270).

3. THE SIMPLE MECHANICS OF MOTION AND ITS IMPLICATION FOR THEATRE

If biomechanics deals with the study of human body and the laws that govern motion, then, effective and efficient application of Meyerhold's biomechanics calls for an understanding of the simple mechanic of motion. According to Wilson and Buffa, mechanics refers to the branch of physics that deals with the study of motion and the forces that cause and affect motion. They argue that the movement of any implement is under the influence of the laws of mechanics. These are force, gravity, friction, stability (balance), acceleration, velocity and motion to mention some (32). So it is in theatre. There is need to

study and appreciate the orientation of these forces to ensure effective and efficient movements on stage and screen.

3.1 MOTION

Motion (moving) connotes a change of place or position at a particular distance (length) and instant time (Wilson and Bugga, 32). They further argue that all bodies or objects are capable of moving from one place or position to another and if only force is applied to it. it implies that the force must overcome the object or body weight to enable it move (33). This is a variation of James Isaac Newton's first law of motion, sometimes called the law of inertia. He states that,

> *In the absence of an unbalance applied force, a body at rest remains at rest, and a body already in motion remains in motion with constant velocity – constant speed and direction (Wilson and Buffa, 102).*

It means that a change in motion or an acceleration (change in speed and direction) is evident of force. Force is applied by the human body through a continual manipulation of muscular and skeletal system complexes. The implication for theatre practice is that theatre is a movement activity. When an actor moves or travels on stage, his or her position changes with distance (length), speed and time. Francis Hodge articulates this principle concisely when he states:

> *Movement is the actual transit of an actor from one point on the stage to another. It includes gesture in the body sphere … is always animate during the process of movement, but it is a separate tool from gesture in that the actual distance traveled, the route of travel and the speed of travel all declare specific values in themselves distinct from gesture (156).*

As a matter of fact, performers must be reminded of the dynamic of movements, the distance (length), speed and time of travel, and its relationships to force. The study of force, is therefore, necessary for effective and efficient performance of actors on theatre stage and screen.

3.2 THE PRINCIPLE OF FORCE

Force is simply something capable of changing an object's state of motion. It is the energy expended to change the state of motion of a body or object. In another way, motion can only result when considerable amount of force has been applied to overcome the object's inertia (Wilson and Buffa 100; Efuekwe, 208). As a matter of fact, Isaac Newton's first and second laws of motion clearly define the role of force in the movement of a body or object. We have earlier explained Newton's first law of motion (law of inertia) as it concerns force. For further clarity of the guiding principles of force, it is necessary to state Newton's second law of motion. It states that,

> *The acceleration of an object is directly proportional to the net force acting on it an inversely proportional to its mass. The direction of the acceleration is in the direction of its applied force (Wilson and Buffa, 103).*

In all, the Newton's first and second laws of motion mean that force is applied to move an object or body and to change its direction. Force must be applied directly by the human body through a continuous manipulation of the muscles, nerves and bones to enable the motion (movement) of a body or object takes place. The study of force is important in theatre because it would enable the performers to understand that force will always be needed to pull, push or move a prop, or body on stage and screen. There is need for performing artists to learn and develop the skills of manipulating the muscles, nerves, bones, joints to generate force to enable them to push, pull or move props, body, and to move faster or slow down on stage or screen.

3.3 STABILITY (BALANCE)

Stability means balance or equilibrium. In all activities, whether stationary or moving, balance is an important factor and must be aimed at, all the time (Efuekwe, 210). In achieving stability or balancing, the body or object always makes adjustment to balance itself at any given circumstance. Wilson and Buffa describe, concisely the condition for balancing or achieving stable equilibrium.

> *An object is in stable equilibrium as long as its centre of gravity after a small displacement still lies above and inside its original base of support. That is, the line of action of the weight force of the centre of gravity intersect the original base of support (262).*

So it is with the movement of actors or props on theatre stage. Balancing or stability is fundamental to the movement of actors and properties on stage and screen. Perhaps, performers will gain advantage in performing better when they understand the relationship between displacement versus body adjustment, and balancing. In the course of accomplishing complex movements, movement pattern and movement combinations, the actor's body or prop may be displaced. The actor's body inherently learns or endeavours to adjust itself to normal or balance position. There is need for the director to learn and develop balancing skills in directing movement and movement training. Well articulated balancing skills would help the actor to perform various movements, movement patterns and movement combinations on stage and screen.

3.4 THE CONCEPT OF FRICTION

Friction is simply the force between two surfaces in contact which always opposes the relative motion between them (Raju, and Arora, 170-171). Wilson and Buffa state this principle rather elaborately,

> *Friction refers to the ever-present resistance to motion that occurs when ever two materials or media are in contact with each other. This resistance occurs for all types of media – solids, liquids, and gases (121).*

In *advance physics*, Steve Adams and Jonathan Allday argue that microscopically, all surfaces are rough and we rely on the friction on the ground, pushing towards on our foot. Principally, to prevent it slipping back when we walk, run, slide or jump. According to Adams and Allday, if table tops were friction free, it would be almost impossible for anything to remain on top of one (94-96). Because an actor would always walk, run, jump, swing, hop, skip, slide, sway or stretch on the stage or screen, it is important to remind him that without friction, his or her foot will shift backward. And that a performer must not put on foot wears that are friction free. There is need therefore to remind the performers to increase the force of friction while walking, running, jumping or swaying on slippery surfaces on stage or screen. Perhaps, the performers would gain advantage in performing better when he or she understands the force of friction in relation to the nature of the surfaces in contact.

The director must learn, understand and teach the actor basic techniques of increasing and decreasing force of friction while performing on stage and screen.

3.5 GRAVITATIONAL FORCE

Gravitational force is the force that makes an object or body fall to the ground. It is the force of attraction between objects. The idea was conceived by Isaac Newton in his law of Universal gravitation, adding the force of attraction between two objects is directly proportional to the product of the masses of the objects and inversely proportional to the square of the distance between them (Yong Anyakoha and Okeke, 201).

The law means that all body or objects on earth response top the force of gravity. It implies that when

a body or object bounces (jumps up), there exist a force of attraction that makes it fall or pulls it back to the earth. Yong, Anyakoha and Okeke express this idea forthrightly when they assert, that if there is no resistance, all objects irrespective of mass, shape, or size fall towards the earth with the same acceleration known as the acceleration of free fall or acceleration due to gravity (77).

The implication for theatre is that there is need to remind the performers and directors that the movement of the body or objects on stage is under the influence of gravitational force. Whether a performer bounces, jumps up, leaps up into the air, or jumps over an obstacle, the force of attraction (gravitational pull) must always try to pull him down to the ground. The same idea applies to the use of props on stage. If a performer throws an object (props) up, the gravitational force must always pull the prop down to the ground. In the light of this, it is important for the beginning directors to study, understand and always consider the laws of gravity in directing movement and in the training of actors. It is equally convenient for actors, trainees and theatre practitioners to study and understand the orientation of the gravitational force in accomplishing stylized and symbolic movements like acrobatics, circus, ballets, and gymnastic movement on stage. Chris Nwamuo articulates this principle graphically when he asserts:

> *Because the elated dancer will always leap to life, and sail the air, there is need to remind him that the law of gravitational force (pull) must always try to pull him down to the ground. So that how to land, where to land or place the next step is a matter for both the dancer, designer and executor (11).*

4. THE CHALLENGES OF MEYERHOLD'S BIOMECHANIC FOR DIRECTORS AND ACTORS

If biomechanics deals with human movement and the forces that act upon it, then, understanding and applying its principles on theatre stage and screen becomes a chore for young and upcoming directors and actors. And if Meyerhold's biomechanic requires stylized and complex movements like gymnastic, acrobatics, ballet and circus movements, then, conceiving, developing and directing sufficient movements, movement pattern, and movement combinations becomes a tasks for young and beginning directors in theatre today. Interestingly, concerns have been raised among theatre scholars like Cameron and Hoffman, about the inability of the upcoming or beginning directors to create and direct sufficiency of movements (Johnson, 156).

Besides, movements is among the director's most powerful means of expression (Brockett, 32). And it is the job of the interpretative director to make movement speak through its pattern, forms and style to the audience (Johnson, 156). So effective and efficient application of Meyerhold's biomechanics requires that young and upcoming directors must create and direct ideal and graceful movements for performances on stage and screen. It becomes a serious tasks for young and beginning directors. It is in the light of the above that Effiong John's thesis becomes applicable.

> *One thing a director must guard against is drabness. And monotony is an easy lead to drabness. Drabness kills interest. But keeping the performance fluid, spiced it with many legged varieties, which comes as characterized movement (156-157).*

If Meyerhold's biomechanics and the biomechanic principles and movement in physical education requires constant physical exercises and activities, then, movement training constitutes another challenge to the upcoming directors in theatre today. Significantly, movement training in theatre today involves developing the actor's body and voice as a more open and responsive physical instrument. The physical training of the actor's body and voice is a recurrent decimal in theatre today. This is so because the psychophysical or purposeful action is the key to today's acting, and a well trained, well developed and responsive body and voice are indispensable (Wilson, 101). Effiong Johnson agrees and further opines that it is worthy of reiteration because the physiological instrument of the actor is the medium

through which movement, albeit a crucial and ineluctable element of performance can be executed (157). To this end, the application of advance physical training exercise activities and programmes in the training of actor's physiological and psychological instruments becomes a task for all young and beginning directors. Indeed, the director is the actor's coach and has the most responsible and tasking job in theatre today, namely; to train the actor to be physical fit to accomplish stylized and symbolic movements on stage and screen.

There is also need for the young and beginning director to learn, acquire, develop and apply physical educationist skills in the training of actors. It was Nixon and Jewett who stated the conditions for effective and efficient application of biomechanic principles and movement in physical education, adding,

> *Biomechanic is now well established as one of the major disciplines of physical education. All teachers and coaches need to be well acquainted with selected fundamental generalization in physical education to enhance the effective teaching and practice of physical skills and training techniques, as well as prompt identification of errors by performances as a basis for future corrections (169).*

In *Theatre Brief Version,* Robert Cohen vividly articulates the challenges to directors in movement training when he asserts;

> *The director is the actor's coach and in practice, the director is likely to spend the largest share of his or her time exercising the particular function. The director is the rehearsal leader and devices what activities, discussion, improvisation, games, exercises, lecturers, blocking or polishing will occupy each rehearsal period. The director leads such activities, with an eye to this ultimate goal (186-187).*

The implication of the above arguments for theatre emphatically implies that young and upcoming directors must be knowledgeable in physical education. This would enable them develop the basic understanding and ability in utilizing and adapting physical education techniques exercises, programmes and activities in the training of actor's physiological and psychological instruments.

On the other hand, there is need for the young and beginning directors to be knowledgeable in the laws of mechanics and how it acts upon motion. This would guide them in directing movement and in movement training (actors training).

Our discussion on Meyerhold's biomechanic also calls for an inquisition into the challenges to the actors in theatre today. The reasons are obvious. Meyerhold's biomechanic is specifically, an acting principle and technique. And so professional actors must be considered. Besides, acting and directing, as principal theatrical engagement intertwined and complement each other in practice and ensemble (Inyang, 610).

Within the context of the above, performers may be scheduled to perform in different theatres and in different kind of roles that are characterized by rigorous and complex movements. In order to prepare for these challenges, performers must be proficient in wide range of techniques and disciplines (Wilson, 96). On one hand, young and upcoming actors must be knowledgeable about human anatomy and the forces acting upon motion and the effect such forces produced. There is need for upcoming actors to understand and appreciate the neuromuscular skeletal and cardiovascular system complexes, and its movement. Proper mastering of both the skeletal and muscular system is the bedrock for developing and accomplishing creature movement on stage and screen.

There is also need for upcoming actors to be knowledgeable in physical education. This would enable them to understand and apply various physical training exercises, programmes and activities in formal professional training. Perhaps, it would enable the performers acquire muscular strength and endurance, cardiovascular-respiratory endurance, economy of action, optimum health, speed, agility, co-ordination, physical relaxation and flexibility, and balance. These are the paraphernalia of physical fitness (Duru, 4). Perhaps, the state of physical fitness would enable the performers to develop and

maintain the ability to accomplish certain physical actions and creative movements including the capacity to run, jump, dodge, fall, climb, swim, ride, lift and sway. It would enable actors to endure long hours of continuous and rigorous acting schedules, guarantee faster and better performances.

On the other hand, there is need for actors to be knowledgeable about the forces acting upon motion and the effects such forces produce. The performer must always be conscious of the laws of mechanics as they play active role in creating and accomplishing movements on theatre stage and screen. For example, the performer must be reminded of the gravitational force because when he leaps, how to land, where to land is very critical.

CONCLUSION

In this study, we have revisited Meyerhold's biomechanics, the biomechanic principles and movement in physical education, and the simple mechanics of motion. We have equally examined the challenges of biomechanic principles to young and aspiring directors and actors in theatre today. From the issues discussed so far, there is need to be convinced that the application of Meyerhold's biomechanics poses serious challenges to young and upcoming directors and actors. If we must apply Meyerhold's directing and acting principles on stage and screen, then, we must be ready to practice it with determination, boldness and consistency.

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