



## Research Article

# Movement and voice plastics: suggestion for the combined use of movement and voice as a method to improve mental, emotional, physical capacities

Beste Naiboğlu<sup>1\*</sup>

Art Psychotherapy Practitioner, Istanbul, Türkiye

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### Abstract

The aim of this study is to propose the Movement and Voice Plastics Method, explain its applications and make its high-detailed taxonomy in order to create a new form through mechanisms of imitation of bodily movement and sound material in humans. It is also to propose a method that can be used in creative art education such as drama, dance, singing and to improve the quality of education and improvisation skills. In addition, another aim of the study is to examine and investigate the importance and contributions of studies related to plasticity in the neurobiological, emotional, sensory and affective development of an individual, which is of high importance in the lives of individuals. These components are also highly important in therapeutic settings. Nowadays, the use of materials of movement and sound/vocal is relatively common in art therapy practices. For this reason, the method and taxonomy specified in this study can also be used in art therapy applications. Therefore, this study also aims to be supportive method for art therapy practices.

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## Introduction

This study is based on proposing a method that includes the use of bodily movement in human beings with sound or the use of human voice in combination with movement. Imitation is as old as human history and plays a very important role in our lives. Human beings have imitated nature and human experiences, objects and matter from the very beginning. Imitation is a concept that also attracted the attention of the great philosopher Aristotle who lived in the 4th century BC. Aristotle mentions the concept of "mimesis" in his famous work called Poetics, which is regarded as the first theory of art in the world and was written on the art of poetry. *Mimesis* means imitating nature and human behavior, that is, mimicking nature and humans. Aristotle was influenced by Plato on this subject. "For some 20 years Aristotle was Plato's student and colleague at the Academy in Athens, an institution for philosophical, scientific, and mathematical research and teaching founded by Plato in the 380s" (Britannica). "Plato and Aristotle argue that artist (Demiurge) and poet imitate nature, thus, a work of art is a relection of nature... According to Plato Demiurge creates the idea and by beholding the idea the Demiurge produces the object; his ability is exalted in the imitation of the Idea" (Baktır 2003). Of course, the act of imitation is not only an act of the artist, but people in their daily life practices repeat this action, which is very important for their development from the moment they are born."... both the desire to imitate and the fact that everyone likes imitations are characteristics that develop with people from their childhood" (Aristotle,

<sup>1</sup> Performing Artist, Art Psychotherapy Practitioner, Istanbul, Türkiye. E-mail: [bestenaiboglu@gmail.com](mailto:bestenaiboglu@gmail.com) ORCID:0000-0001-6811-5232

2005: 1448b 5-15). Imitation exists through the combination of various elements in nature and life. In this study, movement and voice will be discussed, and the rest will not be within the scope of this study.

### **Problems of Study**

The benefits of games for the development of psychomotor skills in their own freedom and spontaneity can be listed as follows: development creativity and improvisation, increase in neuroplasticity capacity, contribution to neurocognitive/neurocognitive processes, emotional development, and being more open to learning, especially for students. So what does this child gain when he makes this embodiment with this game?

### **Importance of Study**

The unity of movement and voice is a phenomenon that we constantly encounter in daily life. We can claim that every moving item also has a sound. Even the movement in the blood circulation, which we cannot feel in our body, exists together with a sound that the human ear cannot hear in the presence of external sounds. "In humans and animals, when the area of the chest where the heart is located is listened to by the human ear, stethoscope or phonendoscope, some sounds are heard accompanying the heartbeats. ...There are two types of heartbeats heard by the ear. ...The first type of heartbeat is strong, deep and long... The second one is clear, high and short duration... Third and fourth heartbeat sounds are physiological sounds that cannot be heard by the human ear, but they can be recorded with special instruments (phonocardiography). These sounds, which have no practical value, are called third and fourth heart sounds. The third heart sound comes after the second sound and can sometimes be heard by ear in young people between 10 and 20 years of age. Since the frequency of the fourth heart sound is very low, it cannot be heard by the human ear, but it can be detected by special instruments" (Emre M. and Bahri, 10 -11. Retrieved 2022). Even if it is not heard or felt, there are tens/hundreds of mechanisms that produce movement and sound at the micro-level in the human body.

For this reason, this study benefited from the games that children set up as they explore the world and their imitation of the sounds and movements they observe in life, which have been experienced by almost all people around the world regardless of their geographical location. Of the endless possible games that a child can set up, let's examine the games that have the elements of imitation only with bodily movement and sound. For example, when we think of a child who wants to be an airplane and imitates the airplane in his game, this child will run quickly by opening his arms to both sides, making the sound "woo..." or whatever sound his auditory reflection is. The child in the example both imitates and takes the form of bodily movement and voice. This child wants to behave like an airplane, and he turns into an airplane in his own reflection, limits and expression. As another example, let's consider a child pretending to be on a motorcycle. He can place his hands on the two invisible handlebars, and perhaps swaying left and right, producing "Rrrrrr" sound. Furthermore, there will be endless possibilities of sounds for individuals speaking different languages. This will be seen as their own original choice of reflection. Although these imitations show similarities when applied by different people, they will certainly produce unique results for each individual.

The Movement and Voice Plastics Method that is proposed in this study states that an individual can engage in a new behavior by using his unique maturity, development and limitations in various aspects, in short, his own natural capacity. This study claims to create and shape a new potential plastic field that the individual will reveal through imagination or direct simultaneous observation, and thus providing behavioral change. For this reason, it is also important to understand the medical meanings of the terms plastic, plasty and plasticity <sup>2</sup>.

In this method, there is no need to practice or know any special advanced technique for dancing, movement, voice training or singing. This method will also provide support for art students and art professionals to foster advanced studies.

One of the standpoints of this method is "shaping", and the other one is "imitation". A child produces imitation games by using the reflections of nature or matter in his own mental design, world, and experiences.

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<sup>2</sup> **Plastic** (medical); 1. Tending to build up tissues or to restore a lost part.; 2. Capable of being formed or molded; 3. Substance formed by chemical condensation or polymerization. **Plasty** (medical); Plastic repair of an organ or part of the body. **Plasticity** (medical); the capability of being formed or molded; the quality of being plastic.

Researchers in the field of dance movement therapy have studied the effects of movement mechanisms on humans. In a meta-analysis study by Koch et al. “Results suggest that dance and movement therapy and dance are effective for increasing quality of life and decreasing clinical symptoms such as depression and anxiety. Positive effects were also found on the increase of subjective well-being, positive mood, affect, and body image” (Koch, Kunz, Lykou, Cruz 2014).

“The seven main characteristics of movement are set out in Table 1.” (Penfield )

**Table 1.** Characteristics of movement

Clarification
Direct access to unconscious
Kinaesthetic memory
Simultaneity
Transmutation
Catharsis
Integration

On the other hand, in the applications of music therapy and voice-vokal therapy, which are two separate genres, there is an active use of human voice and voice-making mechanisms. For example, singing in music therapy practices. “The World Federation of Music Therapy (WFMT) defines music therapy in the following way: *Music therapy is the use of music and/or musical elements (sound, rhythm, melody and harmony) by a qualified music therapist, with a client or group, in a process designed to facilitate and promote communication, relationships, learning, mobilization, expression, organization, and other relevant therapeutic objectives, in order to meet physical, emotional, mental, social and cognitive needs. Music therapy aims to develop potentials and/or restore functions of the individual so that he or she can achieve better intra- and interpersonal integration and consequently a better quality of life through prevention, rehabilitation or treatment. (1997: 1)*” (Darnley-Smith and Patey, 2003). Therefore, the method proposed in this study has the potential to provide these benefits if applied with a qualified therapist.

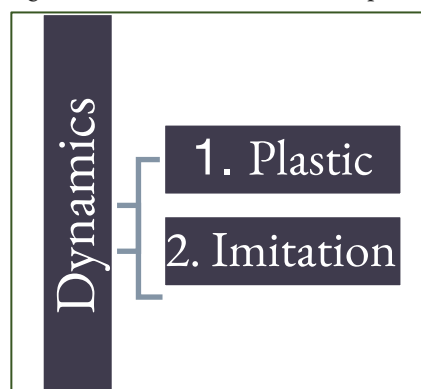
School-age children and young people, individuals studying in different fields of art, and even university students studying in many different fields of science can have fun in a workshop where this method is applied, and who knows, they can even empathize with atomic particles by trying to behave like machines and cells in their field of work.

- Can the benefits be increased if these activities are deliberately maintained with a method and technique for a certain period of time?
- Can a taxonomic concept and system named *Movement and Voice Plastics* be developed as a sequential method?
- Can this system be used for almost all age groups in education, arts, and health (therapeutically), art therapy?

In this study, the application of this method and its taxonomy will be explained. With this feature, this study is unique in terms of not being studied before. As a research method, a literature review was used.

### Dynamics of this method study

There are two basic elements in structuring this method. One of them is plastic and the other is imitation.



**Figure 1.** Dynamics of this method study

## Plastic

Plastic body studies, dance, and movement are taught in actor training and all fields of performing arts. Plastic body and similar posture studies are given to those who are trained in performing arts, such as dancers, opera singers, and actors, in conservatories and academies that provide art education.

“Çukurova University State Conservatory, Information Package/Course Catalog, Opera and Singing Department (introductory page) Profile of the Programme: Recognition of audio material and **the plastic body** in order to sing Opera works; accurate, efficient, and healthy use of audio-breath coordination; the use of breath-control techniques.” (Accessed March 27, 2022).

In the literature, there are studies involving plastic works related to the body and movement. Comprehensive literature reviews have shown that, unfortunately, a plastic study in the field of voice has not been performed yet. Even if it has been performed, it has not been conducted in a formal framework, and the voice plastics concept has not been encountered in the literature. The most well-known and important work in the field of body and movement is undoubtedly the Stanislavsky method, which includes emotional and plastic studies based on imaginations in stage action. “At the beginning of the twentieth century, the Russian theater director Konstantin Sergeievich Stanislavsky developed the first complete system of education for the acting in Russia. The exercises in the Stanislavsky system continue to be taught today and are known internationally as acting fundamentals. While performing, it naturally occurs for the actor to become aware of his emotions, inner spirit, and physical agility. Stanislavsky spent twenty years developing plastica associated with psycho-physical exercises aimed at developing the soul and body aspect of plastica” (Hapgood 1924, 57). This system, which aims to develop the boundaries and technique of the individual by feeding on nature, his own life, and experience, is one of the basic applications in performing arts education today.

The term plastic and its works were also used by 20th-century performance artist, educator, and art theorist Joseph Beuys. He introduced the concept of Social Plastic, which is also commonly referred to as Social Sculpture. He aimed to give an aesthetic shape to the entire structure and social life. “Beuys developed the 'Plastische Theory', allowing the concept of plastic to spread widely, and for him even thought would count as plastic. In the early 1970s, Beuys began to call the most advanced example of this plastic principle the combination of a work of art beyond its fetishistic display value and social organization marked by artistic procedures and potentials.” (Wedemeyer 2017:178).

## Imitation

Although it has not been expressed as voice plastics before, various theories have been put forward on imitating the sounds of nature, experiences, and objects/matter, one of which is the Onomatopoeia. Professor Dr. Mustafa Özkan says the following about this theory in his lecture notes at Istanbul University: “According to this theory, which emerged at the beginning of the XXth century, the main factor in the formation of human language is sound imitation. Human beings have created language by imitating the natural events around them, the sounds of animals and all things that make noise. For example, the cries of animals, their roars, thunder, the crackling of branches, water gurgling, the buzzing of bees, etc. Words are formed by imitating sounds like: pop, crack, bark, meow, mumble, squeak, buzz, and baa. Many of the other elements in the lexicon of the language have likewise emerged from the imitation of certain sounds: clattering, groaning, snoring, grunting, rumbling, tinkling, etc.” (Özkan M. Istanbul University Faculty of Open and Distance Education Lecture Notes).

According to Aristotle, who introduced the concept of “mimesis”, that is, imitation, in his much older work, *Poetics*; “...Some arts imitate through sound; according to this, in all the arts mentioned, imitation, in general, is carried out either through rhythm, word or harmony. These three are used either separately or together. For example, panpipe (syrinx) instruments, such as flute and kitara, use only harmony and rhythm. The art of dance uses rhythm alone without harmony because dancers imitate character traits, passions, and movements through rhythmic body movements.” (Aristotle, 4th century BC). From this citation, it is possible to understand that the sounds emanating from instruments in vocal art are imitations of various components of life. In the same way, when we envisage that the human voice comes

from an instrument in the human body, it is possible to benefit from its existence, whether it is for the purpose of making art or not.

The mechanism of voice formation in humans, which is a complex structure, is the result of many multi-directional simultaneous processes and operations. "The formation of voice and speech is a complex function in which central neural regulatory mechanisms, pulmonary and laryngeal functions, resonance and articulation functions occur together in humans." (Geker et al. 2000). In daily life, people use their voices in a limited way without any special effort. The larynx structure shaped through language learning and the musculature that supports/provides the vocalization mechanisms show limited development when not exposed to improvisation, discovery and use with different, special forms or techniques. "The sounds of language are studied by a discipline called phonology. Humans have the ability to make a variety of sounds. However, no language uses all of these sounds. People learn the sounds of the language of the environment in which they were born and use them perfectly. For this reason, the sounds of languages learned later cannot be voiced like native speakers of that language." (Aydin S. 2011, 228).

Language is the most important voice-producing and communication tool of humans. "Language development, which is an element that surrounds people's life to a large extent, is possible by having a high level and complex vocalization" (Denizoğlu, 2020). However, even in the use of language, which is one of the most common actions in human life, speaking a language allows only a part of the sound-making capacity of a person to be used. Thus, it is possible to say that over time, people cannot benefit from the secondary gains that vocalization can provide. These gains can be expressed as follows: neurobiological effects, being open to learning, providing sensory integration, emotional development, well-being, etc. However, scientific studies of plastic studies that have been researched in voice therapy and that also affect neurocognition capacity are still limited today. "...the role of cognitive mechanisms critical to voice therapy has yet to be explored." (Feinstein et al. 2021). It is clear that there is a need to investigate these mechanisms that mutually affect each other.

It should not be forgotten that the functions of the sense of hearing are active. "Auditory stimulus .... are acoustic waves or sound waves. ...a mechanical vibration creates a current generating potential in some of the inner ear hair cells. ...The current goes along these fibers to the brain." (Morgan, 1981). "Sound is a mechanical wave. It needs a vibrating source and a 'environment' in which it can move forward. Moreover, a hearing ear is necessary for sound to exist. Therefore, hearing is an indispensable condition (sine qua non) for the existence of sound. It does not exist without the source, the environment, and any of the perceiving ear." (Denizoğlu, 2020).

Of course, the presence of sound alone is not enough. In an environment where all these elements exist, if we do not focus on 'listening' and an 'awareness' dimension of these sounds in the environment where we live, wouldn't we be succumbing to the unconscious recording system of a mechanism that performs purely sensory functions? Directing our attention to what is going on around us will necessarily go beyond the blurry sounds and images stored in our minds. At this point, the studies to imitate the external and environmental sounds and movements to be made with the *Movement And Voice Plastics Method* will provide the sounds and movements of the environment, nature, experiences, matter, and materials; that is, it will open the way of observation and empathy regarding the general behavior of all these external and environmental elements and will not only improve communication skills with the external environment but also provide neurobiological gains.

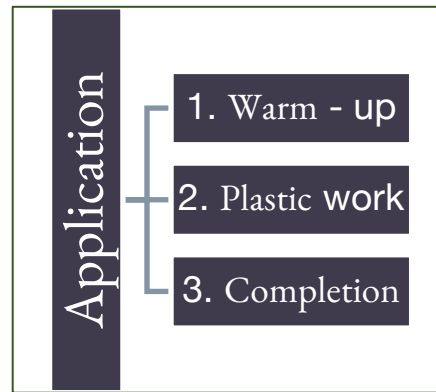
## Method

### Movement and Voice Plastics Method and Its Application

The application of the *Movement and Voice Plastics Method* proposed in this study has three stages. However, there are infinite number of ways and sequences of operation that can vary and be modified depending on the creativity of the practitioners. Studies can also be carried out for different phased processes.

The three stages proposed in this study are, respectively, as follows:

- Introduction: Warm-up
- Body: Plastic Work
- Conclusion: Completion



**Figure 2.** The application of the Movement and Voice Plastics Method

### Warm-up Stage:

The first of these phases is the Warm-up stage. Based on my totally 4-years psychiatric clinic experience acquired through Art Psychotherapy supervision and education in Istanbul University, Istanbul Faculty of Medicine, during the Warm-up Stage the group or individual is pulled into state of “here and now”. This Warm-up phase along with the pulling into the state of “here and now” can also be seen in therapeutic art practices. For this reason, the trainer or therapist running the workshop should use easy vocal warm-ups together with a physical warm-up that can consist of endless possibilities, including easy, daily movements and sounds that do not require a special technique.

As an example, the instruction of “Let’s open our arms to both sides and support this movement with a voice” can be used. This will be a sound made by anyone in the group. Let’s take the -u- sound as an example. While the group members open their arms to both sides, they will simultaneously experience the sound of this movement by making the “neeaooow” sound given as an example above. During this warm-up phase, movements and sounds will be mirrored by all members. The mirroring method will not only provide the opportunity to imitate the person or persons producing this movement and voice by taking the initiative in the group, but also will result in the simultaneous observation process of all group members seeing each other through its repetition. Thus, after a few different movements and vocal warm-ups, you can be ready for the main exercise.

The participation of the person who manages the group, educator or therapist, as a participant in these warm-up activities will often contribute to positive results and especially to group cohesion. The way to use special techniques and methods is possible depending on the level of the group. When this work is presented to the experience of art students in a conservatory, the group will automatically be at a higher level as they will reveal the work within their own bodily limits.

### Plastic Work

This is the main work, and it should be given at least two or three times as much time as the warm-up. In this stage, a main title is chosen from the *Taxonomy of Movement and Voice Plastics*, which have been worked on for over ten years. For example, let’s look at the title *1.1.Nature Plastics* under the *1. Concrete terms* category. Under this title, there is a category of *1.1.1. Natural Events*. This will form the general framework of the main study. Let’s consider *1.1.1.1. Non-catastrophic Natural Events* among natural events. After the interaction of the group with a question in the form of “What are the non-catastrophic natural events?”, let’s go through a process of discovery under this category to form the plastic by giving *1.1.1.1.3. Rain* as an instruction. “How does it rain?, how are the movements of the droplets during the precipitation or how are the reactions and movements of the people when they touch raindrops? and what are the sounds that can be heard in the rain?” Out of all these multiple possibilities, a few plastics about “rain” will be made and mirrored by the group. Thus, mirror neurons will also be activated.

“Since its discovery, these neurons have been associated with many complex functions such as recognition, interpretation, imitation of actions, empathy, learning, and memory. This suggests that the mirror neuron system forms a kind of link between cognition and action.” (Hari et al. 2021). “...mirror neurons in humans are activated even when observing meaningless movements. Observing meaningful actions causes activation of the frontal and temporal areas of the mirror neuron system (MNS), while observing meaningless actions causes only the frontal areas to be activated.”

(Mehta, Bgandari 2016). "It has been suggested that the human mirror neuron system's sensitivity to meaningless actions may play a significant role in determining people's ability to imitate others' actions." (Hari et al. 2021).

"Many previous and new studies in the literature suggest that mirror neurons play a role in social functions such as learning, communication, empathy, imitation, and in understanding the physical components of other individuals' movements, the goal, intention, and emotional processes behind them. All of these functions are categorized under a general title called "action comprehension", and it is reported that they play a role in this main function in most of the studies." (Galese et al. 1996).

There is a convergence between cognitive models of imitation, works on imitation and empathy derived from social psychology studies, and recent empirical findings from the neurosciences. ...Social psychology studies have shown that imitation is common, automatic, and facilitates empathy. Neuroscience research has demonstrated physiological projection mechanisms at the single-cell and nervous system levels that support cognitive and social psychology forms." (Iacoboni, 2008). It is clear that the gains linked to the increase in brain activation with the activation of mirror neurons in plastic studies are also a subject of research.

For this reason, in order to ensure that the plastic application with the theme of "rain" given above covers a specific process, transforming it into a meaningful whole and ensuring the continuation of the activation of human complex mechanisms, plastic studies continue by adding other titles with similar themes from the *Movement and Voice Plastics Taxonomy* list below. Crossovers and various combinations can also be performed in the taxonomy list, e.g. 'the plastics of a daisy in the rain'. In the ongoing study, the movement and voice flow depends on the creation of a sequence or chain by adding these plastic motifs to each other. This sequence is arranged consecutively, and a structure similar to choreography or music is obtained from this sequence. Completely different options will arise from each individual in the group, and the use of movement and voice will change for each figure. As a result, both different plastic samples created with the same directive and plastic motifs created with different options will be connected to each other, and they will be able to create a combination. The study can be continued to obtain a new combination or sentence under a completely new title depending on the target length, the number of people, and the time allotted to the workshop.

### Completion Stage

At this stage, the definitions of plastic studies are carried out. "How do we define this simultaneous observation or mental design/imagination/dream that we are making as a plastic study of kinesthetic-vocal imitation that is expressed to be embodied in the body and human voice?" This is the first phase.

The second phase is to share how it feels and emotions in the study. A common feeling can also be selected from a few alternatives put forward in a crowded group. This sharing corresponds to the answer to this question: "How did we feel doing this study?". What we aim to do here is to explore emotions while concluding the work and thus provide closure by creating awareness.

### Conclusion

As a result, scientific studies on the simultaneous use of movement and voice as a supportive, developing, and curative method for various age groups are extremely rare. An implementation proposal of Movement and Voice Plastics that can be used in the field of art, education, and health (therapeutically) as a method was presented in this study. When this method is applied, it will be the beginning of a mental, emotional and physical change. It will enable the transition from any state of perception to the state of observing. The study of embodying the world, nature, human, object, emotion, music, painting or every observable and felt element of life in their bodies as motion and sound, which people perceive with an approach that they aim to imitate by observing on anything, is a subject open to research.

The act of imitation is one of the natural characteristics of humans. As a result of complex human nature, which allows the perception of human beings' experiences and elements of nature through the senses, it has been possible to collect the possible studies of these phenomenological, kinesthetic, and vocal plastic discoveries under various headings, which allow them to be embodied through movement and sound by observing and experiencing. From this point of view, the Taxonomy of Movement and Voice Plastics was obtained.

**Table 2.** Taxonomy of movement and voice plastics

<b>1. Concrete Terms</b> In this category, actions and events that are not intangible, perceptible, and observable through the senses are listed. <b>1.1. Nature Plastics</b> 1.1.1. Natural Events 1.1.1.1. Non-catastrophic Natural Events 1.1.1.1.1. Tide 1.1.1.1.2. Wind 1.1.1.1.2.1. Breeze 1.1.1.1.2.2. Strong Wind 1.1.1.1.3. Rain 1.1.1.1.3.1. Downpour 1.1.1.1.3.2. Drizzle 1.1.1.1.3.3. Light Rain 1.1.1.1.4. Aurora 1.1.1.1.5. Snowfall 1.1.1.1.5.1. Blizzard 1.1.1.1.5.2. Large Snowflakes	1.1.1.2. Catastrophic Natural Events 1.1.1.2.1. Disasters 1.1.1.2.1.1. Earthquake 1.1.1.2.1.2. Flood 1.1.1.2.1.3. Tsunami 1.1.1.2.1.4. Storm, Hurricane 1.1.1.2.1.5. Landslide 1.1.1.2.1.6. Avalanche 1.1.1.2.1.7. Lava 1.1.1.3. Seasonal Events 1.1.1.3.1. Fall 1.1.1.3.1.1. Falling Leaves 1.1.1.3.2. Winter 1.1.1.3.2.1. Frost 1.1.1.3.3. Spring 1.1.1.3.3.1. Blooming 1.1.1.3.4. Spring 1.1.1.4. Nature and Wildlife Patterns	1.1.1.4.1. Hunting 1.1.1.4.2. Sheltering 1.1.1.4.3. Fighting 1.1.1.4.4. Escaping 1.1.2. Plant Plastics 1.1.2.1. Trees: Includes all tree species. 1.1.2.1.1. Things Growing on Trees 1.1.2.1.1.1. Fruits 1.1.2.1.1.2. Seeds 1.1.2.1.1.3. Nuts 1.1.2.2. Bushes 1.1.2.2.1. Ground Cover Plants 1.1.2.2.1.1. Vegetables 1.1.2.2.2. Thorny Bushes 1.1.2.3. Herbs 1.1.2.4. Flowers 1.1.2.4.1. Flowering Trees	1.1.2.4.2. Blossom Flowers on Ground 1.1.2.4.3. Tropical Flowers 1.1.3. Animal Plastics 1.1.3.1. Wild Animals 1.1.3.2. Pets 1.1.3.3. Herd Animals 1.1.3.4. Land Animals 1.1.3.4.1. Primates 1.1.3.4.2. Reptiles 1.1.3.4.3. Flying Animals 1.1.3.4.4. Insects 1.1.3.5. Water Animals 1.1.3.5.1. Swimming Animals 1.1.3.5.1.1. Fish 1.1.3.5.1.2. Crustaceans 1.1.3.6.2. Non-swimming Aquatic Creatures 1.1.3.6.2.1. Sponges 1.1.3.6.2.2. Seaweed
<b>1.2. Plastics of Historical and Social Periods</b> This practice is a projection of collective human experiences and common lifestyles. 1.2.1. Past 1.2.1.1. Ages 1.2.1.1.1. Prehistoric Ages (Prehistory) 1.2.1.1.1.1. Stone Age 1.2.1.1.1.1.1. Old Stone Age (Paleolithic) 1.2.1.1.1.1.2. Middle Stone Age (Mesolithic) 1.2.1.1.1.1.3. New Stone Age (Neolithic) 1.2.1.1.2. Metal Age 1.2.1.1.2.1. Copper Age (Chalcolithic)	1.2.1.1.2.2. Bronze Age 1.2.1.1.2.3. Iron Age 1.2.1.1.2. Ages of History (History) 1.2.1.1.2.1. Ancient History 1.2.1.1.2.2. Middle Ages 1.2.1.1.2.3. Modern Age 1.2.1.1.2.4. Contemporary Age 1.2.2. Current Period 1.2.2.1. Ethnic Plastics 1.2.2.2. Global Plastics 1.2.3. Future Period: Some elements in this category could be examined under the title of "abstract" in terms of containing imaginary products. However, the realization and usability of these imaginary elements will be concretized at a later date. Therefore, these terms are in the "concrete" category.	1.2.3.1. Innovative Designs Plastics: It is an advanced imagination study fueled by imagination. We can benefit from projects that are not yet widely used but are planned to be conducted or spread. If the preferred material is a tool that people can touch and use, a plastic study of the behavior of a person using it can be performed. 1.2.3.2. Digital Age 1.2.3.3. Space Age 1.2.3.4. Robotic Age 1.2.3.4. Futuristic Thinking Plastics 1.2.4. Sociological Periods: It covers plastic studies related to production forms, production tools, and labor power.	1.2.4.2. Agrarian Society 1.2.4.2.1. Feudal Society 1.2.4.2.1.1. Serfs (Peasant) Class 1.2.4.2.1.2. Clergy 1.2.4.2.1.3. Nobility 1.2.4.3. Industrial Society 1.2.4.3.1. Working Class 1.2.4.3.2. Bourgeoisie (Bosses) 1.2.4.3.3. Aristocracy 1.2.4.4. Information Society 1.2.4.4.1. Blue-Collar 1.2.4.4.2. Gray-Collar 1.2.4.4.3. White-Collar 1.2.4.4.4. Pink-Collar 1.2.4.4.5. Gold-Collar
<b>1.3. Everyday Life Plastics</b> 1.3.1. Home Lives 1.3.1.1. In the Kitchen 1.3.1.2. In the bedroom 1.3.1.3. In the living room 1.3.1.4. In the Bathroom 1.3.1.5. On the balcony-terrace 1.3.2. School Life 1.3.2.1. Kindergarten 1.3.2.2. Primary School 1.3.2.3. Secondary School 1.3.2.4. High School 1.3.2.5. University 1.3.3. Work life 1.3.3.1. In the Office 1.3.3.2. In the Field 1.3.3.3. Occupations Plastics: Covers all occupational groups. 1.3.4. Unexpected Events 1.3.4.1. Accidents 1.3.4.1.1. Simple Accidents 1.3.4.1.1.1. Home Accidents 1.3.4.1.1.2. Work Accidents 1.3.4.1.1.3. School Accidents	1.3.4.1.2. Severe Accidents 1.3.4.1.2.1. Traffic Accidents 1.3.4.2. Chance Events 1.3.4.2.1. Good Luck 1.3.4.2.2. Bad Luck 1.3.5. Motor Activities 1.3.5.1. Basic Activities: A few of the basic activities are listed below. 1.3.5.1.1. Walking 1.3.5.1.1.1. Slow Walking 1.3.5.1.1.2. Fast Walking 1.3.5.1.2. Leaping 1.3.5.1.3. Hopping 1.3.5.1.4. Running 1.3.5.1.5. Jumping 1.3.5.1.6. Hitting 1.3.6. Equipment Plastics 1.3.6.1. Household Tools 1.3.6.2. School Equipment 1.3.6.3. Workplace Tools 1.3.6.3.1. Professions and Their Tools 1.2.6.4. Technological Tools 1.3.7. Cities Plastics 1.3.7.1. Metropolitan Cities	1.3.7.2. Midsize Cities 1.3.7.3. Small Cities 1.3.7.4. Rural-Pastoral Plastics 1.3.7.5. Suburban Life 1.3.7.6. Villages 1.3.8. Relationships and Roles Plastics in Social Life: This title refers to the imitation of the movements and sounds of attitudes arising from human social relations in the social environment and in various places. 1.3.8.1. Family: It refers to the imitations of movements and sounds that are observed or possible to be observed in social patterns and relationships in the family. 1.3.8.1.1. Child 1.3.8.1.1.1. Older Sister 1.3.8.1.1.2. Older Brother 1.3.8.1.1.3. Middle Borns 1.3.8.1.1.4. Last Borns 1.3.8.1.1.5. Only Child 1.3.8.1.2. Mother 1.3.8.1.3. Father	1.3.8.1.4. Grandmother 1.3.8.1.5. Grandfather 1.3.8.1.6. Cousins 1.3.8.1.7. Uncle 1.3.8.1.8. Aunt 1.3.8.2. Friends 1.3.8.2.1. Male 1.3.8.2.2. Female 1.3.8.3. Unfamiliar People 1.3.8.3.1. People We Met by Coincidence 1.3.8.3.2. People We Try to Connect with 1.3.8.3.3. People Trying to Connect with us 1.3.8.3.4. People We Contacted by Mistake



<b>1.4. Developmental-Universal Plastics</b> 1.4.1. Infancy 1.4.1.1. Newborn	1.4.2. Childhood 1.4.3. Puberty 1.4.3.1. Early Puberty	1.4.3.2. Middle Stage of Puberty 1.4.3.3. Late Puberty 1.4.4. Adulthood	1.4.5. Old Age 1.4.4.1. Young Adulthood 1.4.4.2. Middle Adulthood 1.4.4.3. Late Adulthood
<b>1.5. Sensory Plastics</b> In these plastic works, visible changes that the body perceives during the perception processes through the sense organs will be imitated. For example, the stages of squinting or opening the eyes, leaning the body forward or backward while looking, and creating a posture suitable for this action mean imitating while listening to the sounds coming from the body during this action, albeit at very low frequencies. The creature is accompanied by the sound of its breath even in the quietest possible action. Moreover, we hear many times the sound of the movement of the eyes in their sockets. 1.5.1. Vision 1.5.1.1. Things Hard to See 1.5.1.1.1. In Terms of Dimensions	1.5.1.1.1.1. Small Objects 1.5.1.1.1.1.1. Letters and Characters 1.5.1.1.1.2. Big Objects 1.5.1.1.1.2.1. Extremely Big Objects 1.5.1.1.2. In terms of Near-Far Objects 1.5.1.1.2.1. Seeing Nearby Objects 1.5.1.1.2.1.1. Seeing Nearby Objects 1.5.1.1.2.1.1. Seeing Far Objects 1.5.1.1.2.1.1. Seeing Extremely Far Objects 1.5.1.1.3. Blurred Vision 1.5.1.2. Those Seeing Clearly 1.5.1.2.1. Plastics of Seeing Clearly: while the eyes look at what can be seen clearly, it refers to taking the form and shape that posture and the body. 1.5.1.3. Vision in Motion	1.5.1.3.1. Vision in Slow Motion 1.5.1.3.1.1. In Linear Plane 1.5.1.3.1.2. In the Circular Plane 1.5.1.3.1.3. In Free Plane 1.5.1.3.1.4. While Turning Around 1.5.1.3.2. Vision While Moving at Medium Speed: Motion planes also apply here. 1.5.1.3.3. Vision While Moving at High Speed: Motion planes also apply here. 1.5.2 Hearing 1.5.2.1. Hearing in Terms of Frequencies 1.5.2.1.1. Hearing Low Frequency Sounds Plastics 1.5.2.1.2. Hearing High Frequency Sounds Plastics 1.5.2.2. In Terms of Distance 1.5.2.2.1. Distant sounds 1.5.2.2.2. Nearby Sounds 1.5.2.3. Sounds Easy to Hear	1.5.2.4. Sounds Difficult to Hear 1.5.3. Smell 1.5.3.1. Good Smells 1.5.3.2. Bad Smells 1.5.4. Taste 1.5.4.1. Tasting Sweet Plastics 1.5.4.1.1. Little Sweet 1.5.4.1.2. Extremely Sweet 1.5.4.2. Tasting Salty Plastics 1.5.4.2.1. Little Salty 1.5.4.2.2. Extremely Salty 1.5.4.3. Tasting Sour Plastics 1.5.4.3.1. Little Sour 1.5.4.3.2. Extremely Sour 1.5.5. Touch 1.5.5.1. Plastics of Touching Hard Objects 1.5.5.2. Plastics of Touching Soft Objects 1.5.5.3. Touching the Slippery Objects 1.5.5.4. Touching Liquids
<b>2. Abstract Terms</b> Express the concepts that cannot be seen with the eyes and cannot be perceived by the sense organs. <b>2.1. Emotions Plastics:</b> When all living things feel these emotions, their external reflections on their bodies can be imitated. On the other hand, it is possible to take shape by abstracting any emotion. Movement and sound in the reflections of the emotion of the individual will be used. 2.1.1. Positive Emotions 2.1.1.1. Hopes 2.1.1.2. Wishes 2.1.1.3. Pleasures 2.1.2. Negative Emotions 2.1.2.1. Fears 2.1.2.2. Frustrations 2.1.2.3. Difficulties 2.1.2.3.1. Economic Difficulties 2.1.2.3.2. Academic Difficulties 2.1.2.3.3. Social Difficulties 2.1.2.3.4. Physical Labor 2.1.2.3.5. Emotional Labor 2.1.2.4. Losses and Mourning 2.1.2.4.1 Deprivation <b>2.2. Free Plastics</b> 2.2.1. Improvisation 2.2.1.1a. Movement Improvisation 2.2.1.1a.1. Improvisation According to the Size of the Movement	2.2.1.1a.1.1. Small Movements-Fine Psychomotor Skills 2.2.1.1a.1.2. Basic Movements-Basic Psychomotor Skills 2.2.1.1a.2. Movements According to Body Part and Plane 2.2.1.1a.2.1. Upper Extremity 2.2.1.1a.2.1.1. Improvisation for Head Region 2.2.1.1a.2.1.2. Improvisation for Shoulders and Arms 2.2.1.1a.2.1.3. Hands 2.2.1.1a.2.2. Lower Extremity 2.2.1.1a.2.2.1. Legs 2.2.1.1a.2.2.2. Improvisation Using Feet 2.2.1.1a.2.3. Whole Body 2.2.1.1a.2.3.1. Lateral Improvisation 2.2.1.1a.2.3.2. Sagittal Improvisation In this section, there will be categories arranged as staccato and legato, crescendo and decrescendo, short and long duration, which are listed under the heading "Sound Improvisation" below. There will also be common items for the improvisation section in the movement. These features can also be used in the movement. 2.2.1.1b. Vocal Improvisation 2.2.1.1b.1. In terms of the field of Register-Sound 2.2.1.1b.1.1. Improvisation with Low Voices 2.2.1.1b.1.2. Improvisation with Medium Voice	2.2.1.1b.1.3. Improvisation with High Voices 2.2.1.1b.1.4. Mixed-All Voice Fields 2.2.1.1b.2. In terms of Articulation 2.2.1.1b.2.1. Staccato (Short and sharp) 2.2.1.1b.2.2. Legato (Connected) 2.2.1.1b.2.3. Mixed 2.2.1.1b.3. In terms of Dynamics-Loudness 2.2.1.1b.3.1. Piano (Light-Low): Expresses a low-intensity sound. 2.2.1.1b.3.2. Forte (Strong-High): Expresses the high-intensity sound. 2.2.1.1b.3.3. Progressively Changing 2.2.1.1b.3.3.1. Crescendo Improvisation: Refers to gradually increasing the volume. 2.2.1.1b.3.3.2. Decrescendo Improvisation: Refers to gradually decreasing the volume. 2.2.1.1b.3.4. Mixed: It may contain some or all properties of dynamics. 2.2.1.1b.4. Improvisation in terms of Duration 2.2.1.1b.4.1. Improvisation with Short Duration Sounds 2.2.1.1b.4.2 Improvisation with Long Duration Sounds	2.2.1.1b.4.3. Mixed: Improvisation resulting from the use of long and short duration sounds together. <b>2.3. Plastics of Associations</b> 2.3.1. Free Association 2.3.1. Associations with Instructions: It includes plastic studies on the association formed by a given instruction or word. 2.3.1.1. Associations of Colors 2.3.1.2. Associations of Concrete Elements 2.3.1.3. Associations of Abstract Elements <b>3. Special Plastics</b> 3.1. Face Plastics 3.1.1. Mimics: A few of the mimics have been selected and listed. 3.1.1.1. Joy 3.1.1.2. Sorrow 3.1.1.3. Astonishment 3.1.1.4. Fear 3.1.1.5. Anger 3.1.1.6. Compassion 3.1.2. Improvisation 3.1.2.1. Improvisation with Eyes 3.1.2.2. Improvisation with Mouth 3.1.2.3. Improvisation Using the Whole Face

## References

- Aristotle. (1993). *Poetics* (İ. Tunalı, Trans.). Remzi Kitabevi. (Original work published ca. 384–322 BCE)
- Arpad, O. (2019, January 15). *Nöroplastisite nedir?* [What is neuroplasticity?] <https://noroblog.net/2019/01/15/noroplastisitenedir/>

- Baktır, H. (2003). The concept of imitation in Plato and Aristotle. *Sosyal Bilimler Enstitüsü Dergisi*, 15(2), 169–179. <https://dergipark.org.tr/tr/download/article-file/219264>
- Başaran, D. C., Yıldırım, F., Ekenci, B. Y., Kılıç, S., & Ülgen, P. (n.d.). *Nöroplastisite ve güncel yaklaşımlar* [Neuroplasticity and modern approaches]. Başkent Üniversitesi Tıp Sempozyumu. <http://tip.baskent.edu.tr/kw/upload/464/dosyalar/cg/sempozyum%20ogrsmprsnm15/15.P6.pdf>
- Bengisu, S., & Koçak, İ. (2013). Rezonan ses terapisi yöntemi [Resonant voice therapy technique]. *Türkiye Klinikleri Journal of E.N.T. Special Topics*, 6(2), 22–26.
- Choygan, S. (2017). Semantics of dance and symbolic movement in Tuvan ceremonial system. *Journal of Siberian Federal University – Humanities & Social Sciences*, 7(10), 1002–1006.
- Çukurova Üniversitesi Devlet Konservatuarı. (2022, February). *Bilgi Paketi/Ders Kataloğu, Opera ve Şan Bölümü*. [https://eobs.cu.edu.tr/ProgAmac\\_tr.aspx?ProgID=413](https://eobs.cu.edu.tr/ProgAmac_tr.aspx?ProgID=413)
- Darnley-Smith, R., & Patey, H. M. (2003). *Music therapy*. Sage Publications.
- Denizoglu, İ. (2020). *Klinik vokoloji* [Clinic vocology]. Karaca Tanıtım Hizmet Matbaası.
- Duignan, B. (2018, February 14). *Plato and Aristotle: How do they differ?* Encyclopedia Britannica. <https://www.britannica.com/story/plato-and-aristotle-how-do-they-differ>
- Evrin Ağacı. (n.d.). *Duyular-3: Duyma (işitme) ve ses çıkarma (vokalizasyon)* [Senses-3: Hearing and sounding (vocalization)]. <https://evrimagaci.org/duyular-3-duyma-isitme-ve-ses-cikarma-vokalizasyon-263>
- Gerçekler, M., Yorulmaz, İ., & Ural, A. (2000). Ses ve konuşma [Voice and speech]. *KBB ve Baş Boyun Cerrahisi Dergisi*, 8(1), 71–78.
- Hari, E., Cengiz, C., Kılıç, F., & Yurdakos, E. A. (2021). Ayna nöron sistemi ve fonksiyonlarına klinik yaklaşım [Clinical approach to the mirror neuron system and its functions]. *Journal of Istanbul Faculty of Medicine*, 84(3), 430–438. <https://doi.org/10.26650/IUITFD.2021.814218>
- Hebb, D. O. (1949). *The organization of behavior: A neuropsychological theory*. Wiley.
- Hebb, D. O. (1951). The role of neurological ideas in psychology. *Journal of Personality*, 20(1), 17–39.
- Iacoboni, M. (2008). Imitation, empathy, and mirror neurons. *Annual Review of Psychology*, 60, 653–670. <https://doi.org/10.1146/annurev.psych.60.110707.163604>
- Kıyar, N., & Kalkın, N. (2013). Mimesis'in yapıbozumsal dönüşümleri [Deconstructivist transformations of mimesis]. *Inonu University Journal of Art and Design*, 3(7), 93–98.
- Koch, S., Kunz, T., Lykou, S., & Cruz, R. (2014). Effects of dance movement therapy and dance on health-related psychological outcomes: A meta-analysis. *The Arts in Psychotherapy: An International Journal*, 41(1), 46–64.
- Mehmedović, H. (2018). *Stanislavsky sistem*. KUPDF. [https://kupdf.net/download/stanislavskisistem\\_5a9fc508e2b6f54c289a484f\\_pdf#](https://kupdf.net/download/stanislavskisistem_5a9fc508e2b6f54c289a484f_pdf#)
- Özkan, M. (2024). *Dil nedir ve dilin kaynakları nelerdir?* [What is language and its sources?] İstanbul Üniversitesi AUZEF Ders Notları.
- Penfield, K. (2004). Individual movement psychotherapy. In H. Payne (Ed.), *Dance movement therapy: Theory and practice* (pp. 163–181). Brunner-Routledge. <https://epdf.tips/dance-movement-therapy-theory-and-practice.html>
- Stanislavsky, C. (1988). *Bir karakter yaratmak* [Building a character] (S. Taşer, Trans.). Dost Kitabevi. (Original work published 1938)
- Tıp Terimleri Sözlüğü. (n.d.). *Glossary of medical terms*. <https://www.tipterimlerisozlugu.com/plastic.html>
- Wedemeyer, A. (2017). Pumping honey: Joseph Beuys at the documenta 6. In C. F. E. Holzhey & M. Gragnolati (Eds.), *De/Constituting wholes: Towards partiality without parts* (pp. 177–214). Turia Kant.
- Weygandt, S. (2024). Spirituality of the soma in Isadora Duncan's dance and Konstantin Stanislavsky's plasticity. *Dance Research Journal*. <https://academia.edu/>
- Yetişken, H. (2012). Aristoteles'te sanatın neliği ve işlevi [The nature and the function of art in Aristotle]. <https://dergipark.org.tr/tr/download/article-file/271947>
- YouTube. (n.d.). *How to develop character through animal exercises*. [https://youtu.be/DvFM\\_y93aTc](https://youtu.be/DvFM_y93aTc)