

## THERAPEUTIC USES OF “ABHINAYA”: A HYPOTHESIS BASED ON HUMAN BIOSCIENCE

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### Abstract

We are human because of our brain, our hand and our heart. only the human being can express inspiration and emotion by combining all three and thus produce the expression of the human condition in writing, poetry, music, dance, visual art and design and theatrical art, both stage and screen- all a creative expression of the heart and soul. Abhinaya is associated strongly with different emotions. The mind of a human act and produce different neuro chemicals based on the analysis of different emotions. As per bioscience or medical science human body cure the disease. As the mind is main factor or a trigger to immune system and immune system depends upon neuro chemicals, hypothetically if we can control our mind then we can cure ourselves. Acting is an art of controlling the mind in terms of emotion. This paper aims to discuss the possibilities of controlling the mind and order it to produce proper chemicals to cure specific disease.

**Keywords:** Creative expression, theatrical, neuro chemicals, science, bioscience, immunesystem, emotion, hypothetically, cure.

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*Is emotion a magic product, or is it a physiologic process which depends on an anatomic mechanism?*-J.W.Papez, 1937

Throughout the day, we experience a variety of emotions. For the most part, these emotions are transient in nature. However, when these emotions become intense or are unremitting they can have very dramatic effects on our behaviour. The depressive syndrome is an example of a state that is characterized by unrelenting sadness accompanied by a deficit in one’s ability of emotion that attempted to relate experience of emotion to physiological functions. He tried to describe the human experience of emotion:

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“Conceive of yourself, if possible, suddenly stripped of all the emotion with which your world now inspires you, and try to imagine as it exists, purely by itself, without your favorable, hopeful or apprehensive comment. It will be almost impossible for you to realize such a condition of negativity and deadness. No one portion of the universe would then have importance beyond another; and the whole collection of its things and series of its events would be without significance, character, expression, perspective. Whatever of value, interest, or meaning our respective worlds may appear imbued with are thus pure gifts of the spectator’s mind.”

The term “emotion” dates back to 1579, when it was adapted from the French word *emouvoir*, which means “to stir up”. The true emotion was introduced into academic discussion to replace passion. According to one dictionary, the earliest precursors of the word likely dates back to the very origins of language.

In some uses of the word, emotions are intense feelings that are directed at someone or something. On the other hand, emotion can be used to refer to states that are mild (as in annoyed or content) and to states that are not directed at anything (as in anxiety and depression). One line of research thus looks at the meaning of the word emotion in everyday language and this usage is rather different from that academic discourse. Another line of research asks about language other than English, and one interesting finding is that many languages have a similar but not identical term.

Emotions have been described by some theorists as discrete and consistent responses to internal or external events which have a particular significance for the organism. Emotions are brief in duration and consist of a coordinated set of responses, which may include verbal, physiological, behavioural, and neural mechanisms. Psychotherapist Michael C. Graham describes all emotions as existing on a continuum of intensity. Thus fear might range from mild concern to terror or shame might range from simple embarrassment to toxic shame. Emotions have also been described as biological given and a result odd evolution because they provided good solutions to ancient and recurring problems that faced our ancestors. Moods are feelings that tend to be less intense than emotions and that often lack a contextual stimulus.

The primary emotions are anger, fear, pleasure, sadness, and disgust. Other emotions are affection, angst, anguish, annoyance, anxiety, apathy, arousal, awe, boredom, confidence, contempt, contentment, courage, curiosity, depression, desire, despair, disappointment, distrust, dread, ecstasy, embarrassment, envy, euphoria, excitement, frustration, gratitude, grief, guilt, happiness, hatred, hope, horror, hostility, hurt, hysteria, indifference, interest, jealousy, joy, loathing, loneliness, love, lust, outrage, panic, pity, pride, rage, regret, remorse, satisfaction, shame, shock, shyness, sorrow, suffering, surprise, trust, wonder, worry, zeal, zest, etc.

Emotions can be conceptualize in terms of their functional or adaptive (help us survive) significance. Negative emotions such as anger and fear may promote avoidance or defensive behaviour whereas the positive emotion of pleasure may facilitate ingestive, exploratory, sexual, or novel-seeking behaviour. Thus, emotions and feelings may serve to achieve homeostasis or to facilitate adaptive behaviour and equilibrium.

We typically view emotions as primitive and instinctive responses that are not associated with complex intellectual or cognitive functions. Certainly, key stimulus elements in the environment can trigger instinctive emotional responses (imagine confronting a large, threatening animal). However, cognitive-emotional interactions are extremely important in the

elicitation of everyday emotions. In primates and humans, the brain has a striking capacity to learn and remember the emotional significance of diverse stimuli and events. Furthermore, our cognitive capacity allows us to assign emotional valence to stimuli, and to change the value that was previously assigned to a stimulus. For example, a child may be initially fearful of dogs, but through positive experiences the child may eventually enjoy and approach them. As another example, imagine the emotions associated with a new relationship. Initially, seeing the person may evoke positive emotions of desire and happiness. However, after a nasty breakup, the same person could easily elicit emotions of anxiety, tension, and anger. This second example illustrates two important points. First, the sensory or perceptual analysis of the person is the same (i.e., this is Bob). The physical expression of emotion may also be the same (i.e., racing heart, flushed sensations, increased breathing rate). Second, the emotional reaction to the stimuli depends on cognitive processing. In other words, the evaluation of the stimulus (the person) in conjunction with past experiences determines the feelings or the conscious experience of joy or anger. Studies of brain functions reveal that neural pathways exist for these important cognitive-emotional interactions.

Other important word is “neurotransmitter,” when a person experiences a happening he reacts to it with physical outcome of an emotion. For example a person encounters with a snake. He definitely react something, because it’s a natural process of a human. But it is not necessary that the person always react with fear to a snake. One human who doesn’t know about a snake, the person first time watching a snake and don’t know about the consequences being bitten by a snake than the person will be curious about the living moving object. (i.e. snake) point is that a person express reactive emotion when he/she have a previous memory and information about the object or incident for which reacting emotion are going to express.

Same but reversible process is abhinaya. Actor acts or express emotions on stage with the help of his/her memory and expertise performing the act. In this process he/she recreate all the emotions that is universal truth. By means of any style(bharatnatyashashtriyaabhinay or western style of acting) the performance is recreation of different emotions according to the act. Scientifically in the process of emotional episode the brain releases chemicals or neurotransmitters. These neurotransmitters are responsible for different physical change. A sequence of events that effectively describes the coordination involved during an emotional episode as below.

- 1) Cognitive appraisal : it provides an evaluation of events and objects.
- 2) Bodily symptoms : these are physiological component of emotional experience
- 3) Action tendencies : a motivational component for the preparation and direction of motor responses.
- 4) Expression : facial and vocal changes which almost accompanies an emotional state to communicate reaction and intention of actions.
- 5) Feelings : the subjective experience of emotional state once it has occurred.

Basically in living process of a human being emotional experience’s sequence is as cognitive appraisal----bodily symptoms----action tendencies----expressions----feeling. Same thing happens when we burn the skin or we face a wound. As above mentioned sequence mind respond to the wound or burn and hence body’s immune system activates automatically with the

neurotransmitters. The white cells know where to go what to do, the platelets knows where to go and what to do. This is a natural process of mind functioning. Fever or chills are protecting physical actions performed by body with the instruction of the neurotransmitters.

An actor did the same process but in reverse order. That is feeling---expressions---action tendencies---bodily symptoms--- cognitive appraisal. Here actor consciously gives signals to his/her mind to feel an emotion. It's obvious that as per science of human body when mind gets a signal either real or self generated (in the case of satvik abhinaya) neurotransmitters releases and do its work.

It is just like to produce emotion memory in method acting. The process of concentration in abhinaya helps to trigger production of dopamine and hence it reduces tension.

In angik abhinaya, body is the medium of expression. For dance practice, different parts of body (anga, upanga and pratyanga) are used. Different physical exercises etc are parts of the abhinaya in dance performance. Dance is a nonverbal form of art so it is obvious that codified signs (mudras) are most important part of expression of an emotion. These mudras are similar to the points used in acupressure and also effective as pressure points works in different illness. It is proved that intense workout for 30 minutes can reduce risk of diabetes so we can say that intense practice of dance for minimum 30 minutes can reduce the risk of diabetes.

Hard practice of abhinaya either in dance or drama helps to improve blood circulation and due to proper circulation of blood to different part of body can improve quality of life. It also helps to reduce tension and negative thoughts. When mind gets peace our body feels stress less and fresh. With peace of mind body is also get balanced and a person have control over mind, body and soul.

Vachik Abhinaya consist of different musical instruments, singing, poetry recitation etc. music creates a stable state of mind and provide a healthy environment to mind so mind can produce neuro-chemicals which are responsible for healthy life. Serotonin reduces stress and helps enzymes to reduce fat in body and as a result a person can lose obesity with the help of Vachik abhinaya. Vachik abhinaya helps to strengthen lungs because control over breathing is essential part of Vachik abhinaya. Exercises like 'omkar' and 'pranayam' helps mind to forget all tensions and concentrate only on inner peace and hence it reduces stress.

It is also proven by physiotherapist that rehearsals of a full length play is equal to a healthy walk of approx. five km. and passionate practice of angik abhinaya in dance is equal to brisk walk of 6/7 km. it is obvious that it helps to reduce body fat and obesity.

Satvika abhinaya is related to neuron activity of mind. The area of research in medical terminology is vast and yet to explore by scientists. But logically, control over mind body and soul is necessary to perform Satvika abhinaya and this process helps to produce neuro-chemicals and as described ago these neuro-chemicals are responsible for good functioning of healthy biological life.

So, hypothetically if a link between exact amount of required neurotransmitters and illness can be established, then an actor can give signal to generate exact amount of exact neurotransmitter and the neurotransmitters like dopamine or serotonin (it is proved with different experiments that music or rehearsal of a play increase the level of serotonin and dopamine which gives calmness and remove anxiety.) can reduce the stress or the neuro-chemical like noradrenalin can reduce the risk of arthritis.

In short a perfect combination with medical science and abhinaya can give great results and there are scope of sky is the limit in this area.

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