

**The Psychological and Physiological Relevance of
Bharathamuni's Theory of Rasa:
A Study on the Basis of Colorgenics**

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Certificate

This is to certify that the Minor Research Project titled **The Psychological and Physiological Relevance of Bharathamuni's Theory of Rasa – A Study on the Basis of Colorgenics**, 1942-MRP/14-15 KLMG035/ UGC-SWRO dated 4-2-2015 is a bonafide work done by Dr.Leena B.Cheriyen Associate Professor, Post-Graduate Department of English, Mar Thoma College, Thiruvalla and that the project is completed, duly adhering to the rules and regulations laid down by the University Grants Commission.

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I, hereby declare that the dissertation entitled **The Psychological and Physiological Relevance of Bharathamuni's Theory of Rasa – A Study on the Basis of Colorgenics** is a bonafide record of the research work carried out by me, during the course of the Minor Research project allotted to me by The University Grants Commission, New Delhi and no part of this study has been submitted earlier or elsewhere for any similar purpose.

Thiruvalla

Dr. Leena B. Cheriyan

Date

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Contents

Chapter	Title	Page
Chapter One :	Introduction	1
Chapter Two :	The Theory of Rasa-An Overview	5
Chapter Three :	The Impact and Influence of Colors on Human Emotions	19
Chapter Four :	The Rationale Behind the Allotment of a Particular Color for a Particular Emotion by Bharathamuni	35
Chapter Five :	Conclusion	59
Works Cited :		65

Chapter - 1

Introduction

The vast and diverse geographical terrain of India offers a myriad panorama of customs, creeds and cultures, manners and tongues, racial types and social systems, but in the midst of this omnium –gatherum there exists a deep fundamental cultural unity, which is responsible for the undimmed splendor of the country in the fields of art, philosophy, literature and aesthetics. Herman Kulke has provided the right insight into this cultural unity of India through the following words “India’s history is the fascinating epic of a great civilization. It is a history of amazing cultural continuity which has reasserted itself again and again”(1). In an effort to unravel this unique culture of India, Jawaharlal Nehru has described India as an “ancient palimpsest on which layer upon layer of thought and reverie had been inscribed, and yet no succeeding layer had completely hidden or erased what had been written previously”(Qtd in Richmond Farley *Indian Theatre Traditions of Performance* 21).

The infinite and exquisite creative power of Indian aesthetics is revealed in its process of symbiosis, and the ennobling idea of assimilation, integration and interdependence among the different critical theories form the basis of Indian aesthetics. The timeless relevance, the scholastic depth and the exquisite charm of Sanskrit criticism has always made it a branch of study that has a perennial value in the annals of literary criticism. In ancient India literary criticism flourished side by side with creative works, and compared to its Western counterpart, Indian aesthetics had a profound impact on the literary scene. The Indian aestheticians headed by Bharatha have left behind a substantive

account of critical theories. Though the later Indian criticism had faced a profound crisis of identity, it is heartening to know that during the last two decades there is an unprecedented growth in the status of Indian literary criticism as an essential aspect of a universal literary culture. A natural consequence of this shift is the increased importance given to Indian critical concepts, tools, and perspectives in analyzing world literature.

The Indian approach to a literary work is a holistic one starting right from its creation by an imaginative writer to its appreciation by a sensitive reader or a Sahridaya. In India the treatment of beauty is so profound and so complete that some of the elementary principles of aesthetics, which are being propounded by the Western scholars now were anticipated by the renowned Indian aestheticians about centuries back. Indian aesthetics offers rich material, fairly well representing the uniqueness of the splendid cultural ethos of India. In Indian aesthetics there exists a conglomeration of cultures with a strong unifying force and a unifying sensibility. It is time that the Indians should work towards evolving newer consanguineous paradigms rather than blindly take over the Western paradigms.

Any literary theory of ancient time can be meaningfully explored only if it is capable of evaluating literary works from the contemporary literary perspective. The progressive reading of *The Natyasastra* has progressed through varied phases both in the Indian and Western critical scenario. Through the developments in the field of physiology and psychology the continuum has always been reaffirmed and reasserted. The Sanskrit literary criticism has great individual works to its credit but it is its totality and its stress on the seminal theory of rasa that enriches, the understanding and awareness in the treatment of diverse human emotions.

The need to know the effects of colors on moods of individuals is very essential in the study and appreciation of art and literature. In most cases especially in performing arts, the use of appropriate or correct colors can enhance the aesthetic appreciation. This research will study the impact of various colors on human emotions, how they are perceived in literary works, their psychological properties and how they also affect the individual's mood and influence the aesthetic relish or rasa. The fact that Bharathamuni was well aware of the importance of colors in enhancing aesthetic relish is evident from the perusal of *The Natyasastra*. Bharatha has allotted a particular color to each rasa and the alambana vibhavas and uddipana vibhavas of each dominant emotion or sthaya bhava also follow a regular color pattern. Rasa is the kernel, the core, the pivot of Indian aesthetics and all other theories revolve round this vital concept. The theory of rasa is as old as human literature itself, and it will be a source of perennial value as long as literature survives in this world as the guide and arbitrator of human emotions.

The thesis entitled 'The Psychological and Physiological Relevance of Bharathamuni's Theory of Rasa – A Study on the Basis of Colorgenics' aims at analyzing and identifying the importance given by Bharathamuni to colors in evoking the different moods and emotions. The researcher's investigation primarily constitutes, dual modes of action: firstly, the emotional, physiological and psychological significance of colors and secondly the rationale behind Bharatha's allotment of a particular color for a particular emotion. This thesis is divided into five chapters including the Introduction and Conclusion. In the introductory chapter an analysis is made on the perennial value of the theory of rasa put forward by Bharathamuni. In chapter two titled 'The Theory of Rasa-

An Overview' an attempt is made to evaluate the different concepts of the theory of rasa. Chapter three entitled 'The Impact and Influence of Colors on Human Emotions" makes a study of the impact and influence of colors on human emotions. The fourth chapter titled 'The Rationale Behind the Allotment of a Particular Color for a Particular Emotion by Bharathamuni 'highlights the importance given by Bharathamuni, to colors in depicting the emotions. The fifth chapter is the concluding chapter and it sums up the findings of this thesis.

Chapter - 2

The Theory of Rasa-An Overview

The Natyasastra is not only noted for its literary value but also for the ethical, moral and aesthetic charm it carries around it. The theory of emotions laid down by Bharatha is the strong foundation that provides, a perennial vision of the rich and complex world of emotions. The origin of *The Natyasastra* is steeped in the rich and splendid mythical traditions of India, but it is impossible for this aspect of its origination to deny its validity and authenticity as a sound critical theory. Emotions are related to physiological arousal, plus cognition about the causes of arousal that result from environmental cues, and this purpose is served by the vibhavas. The psychologists are of the opinion that even in the first hours of life one can see a fixed pattern in the stimuli of each basic emotion.

A successful critical theory should always ascribe the prime importance to human emotions and aesthetic pleasure, and herein reside the authenticity and validity of the rasa theory advocated by Bharatha. The modern tendency is to condemn the ancient and medieval oriental theories as blinkered, polemical, mythical, and lacking in objectivity, but a close perusal of Bharatha's *The Natyasastra* and the treatises of the ancient and medieval Indian aestheticians has established with certitude the stamp of critical objectivity in them.

The rasa theory caters to the text in its totality and concentrates on those features at the syntactic level, those at the discourse level, and those at higher levels of organization i.e. text wide organization. According to the Indian aestheticians the reader's

response to a text is not a hedonistic self-indulgence, but an affective state controlled by cognition and contemplation and is specific to the experiencing of literature. This condition is described by them as aesthetic emotion or *rasa*. This emotional experience of the reader is also regarded by them as the meaning of the text.

In India the artistic theory was derived from the Upanishadic idea of *ananda*, and is linked to the ethical ideal. Indian aesthetics always treats beauty not in isolation but with regard to the other aspects of life. It is linked with *kama*-emotional values, *dharma*-ethical values, and *artha*-economic values. Nagendra is of the view that in Indian aesthetics “Beauty is intimately connected with emotional values: but its identity is revealed only when it transcends the emotion, because emotion is not beauty- the sublimation of emotion is beauty”(11). The *natya* is in fact a depiction and communication pertaining to the emotions of the entire world. It will conduce to piety, glory, and healthy life and will be beneficial to promote healthy intellectual growth. The *natya* in brief will be the instrument of instruction of the world.

In the Indian context *rasa* or aesthetic pleasure is the foundation of all literature and all art forms. *Rasa* according to the Indian aestheticians is the aesthetic expression in a literary composition. Indian aestheticians regard aesthetic experience, as a kind of transcendental joy and it has no affinity to any other experience gained from real life. The aesthetic experience is not the experience of a personal emotion; it is the experience of a universal emotion. It is an emotional state freed from all personal elements. Nagendra defines aesthetic experience as a “complex experience pleasant in essence, in which the intellectual and emotional elements are blended in subtle harmony. It has a separate

identity, because it is more refined than emotional pleasure and more colorful than intellectual pleasure”(27).

The Indian rasa theory can serve as a coherent body of critical theory that would serve as a universal critical framework for all genres in all languages. This Indian theory can be made to subsume the Western methods and transcend them to offer itself as a viable universal theory. The Indian approach to aesthetic relish avoids many traps and pitfalls that waylaid the Western approach .For one thing it does not allow social, ethical or other extraneous conditions to enter into its deliberations of aesthetic relish All the entire evaluation has been conducted almost exclusively on an aesthetic or literary plane. Rasa or aesthetic pleasure is the emotional quality, which distinguishes a work of art from the emotion experienced in real life. K.Krishnamoorthy is of the view that:

Rasas does not imply the emotions actually lived by the poet. They refer only to a disinterested contemplation of emotional states, which have a universal appeal. The exclusion of irrelevant and personal emotions helps the readers to achieve a pure aesthetic state in a sort of sentimental reverie. The contemplative attitude of the poet is thus non- utilitarian, non-volitional, non- emotional and even non-analytical.(223)

Krishnarayan regards rasa theory as a superior theory because the rasa theory caters to the text in its totality and concentrates on those features “at the syntactic level, those at the discourse level, and those at higher levels of organization i.e. text wide organization”(48). In the Indian context rasa or aesthetic pleasure is the foundation of all literature and all art forms. Rasa according to the Indian aestheticians is the aesthetic

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In the Indian literary scenario the impact of literature depends not only on the poets, but also on the responsive audience or Sahrdayas. Literature has its source of origin in the flash of intuitive insight on the part of the artist and finds its fulfillment in the sympathetic evocation of a similar insight on the part of the readers. According to S. Kunjunni Raja “This intuitive insight, on the part of the artist as well as on the part of the connoisseur, is integral, instantaneous and blissful”(95). The aesthetic experience on the part of the sahrdaya or the sensitive reader is a sort of sympathetic evocation of a similar insight on the part of the creative artist.

Exploring deep into human psychology the Indian aestheticians headed by Bharatha have identified eight basic emotions or sthayibhavas. There are also a number of other emotions, which have a sustaining power, though generally they are dormant in human consciousness. The main emotion is also supported by means of these fleeting emotions called transient emotions, sancharibhavas or vyabharibhavas. Bharatha in his *Natyasastra* observes that rasa is produced by the combination or commingling of the vibhavas, anubhavas and vyabhicharibhavas which may respectively be called determinants, consequents and transient states. The determinants are further divided into two. The first is the primary determinant or alambana vibhava and it includes the agents or the causes of emotion like the hero and the heroine. The secondary or excitant determinants are the uddipana vibhavas, which comprise of the setting and the

background. The desired emotion is stimulated by the artist generally through the employment of human agency and atmospheric stimulants called the vibhavas. The ensuants of the strong emotions are called anubhavas or consequents, which again in their turn stimulate the main rasa.

The predominance given by Indian aestheticians to aesthetic pleasure can be gleaned from Bharatha's statement "Na hi rasa drte kaschid arthah pravartate"- Nothing exists without rasa. Bharatha firmly believed that the beautiful and the harmonious blending of the words images, style, metre, and other literary elements lead to aesthetic pleasure. The entire human life is dominated by eight dominant states or sthayibhavas and it is these states that are being converted into rasa. The basic emotions are called bhavas or states and the corresponding art emotions are called rasas or sentiments.

Bharata's maxim about the theory of Rasa is Vibhavanubhava-vyabhicari-samyogaad rasa-nispattih .Rasa is accomplished as a result of the conjunction of Vibhava, Anubhava and Vyabhicaribhava.Vibhava is the objective condition producing an emotion. Vibhava may be of two kinds. [1]Aalambana and [2]Uddipana. Aalambana vibhava means a person or persons with reference to whom the emotion is manifested. Uddipana-Vibhava means the circumstances that have excited the emotion. A man may feel attracted to a woman if the circumstances are co-operating with it. It is easier for a man to be attracted towards a woman of young age if they are thrown alone and there is a beautiful scenery before them, the moon peeping through the clouds, the fragrant breeze blowing, and the like. Any one of such circumstances may be regarded as Uddipनाविभवा, whereas both the man and the woman are Aalambनाविभवऱ to each other.

Anubhava means bodily expression by which the emotion is expressed. Thus the arch glances of a lady, who is in love, her inviting smile, may be regarded as Anubhava. Vyabhicari means a series of diverse transient emotions that feed the dominant emotion. A woman in love anxiously waiting at the rendezvous to meet her lover may feel disappointed that he is not coming, may be anxious that something might have happened to him, may be jealous that he might have been courted by another woman, may feel delight in remembering the coaxing words that he had whispered into her ears, and so on. Like pictures in a cinematograph, emotions of diverse sorts may all at the same time be continuing the constitution of the same emotion. When a young man falls in love with a young woman and his whole frame is shaken, we cannot speak of him as being the subject of Sringara-rasa, or when his son is dead and he is shedding tears, we cannot speak of him that he is in the Karuna-rasa. Rasa is an emotion excited by artistic circumstances or situations. Certain aestheticians hold the view that Vibhava, Anubhava and Vyabhicari are either artistically described or set forth vividly by mime, they co-operate together and in their conjunction Rasa is produced.

Mammata, as a follower of Abhinavagupta repudiates Bhattalollata's view that Rasa is related to the Vibhavas in the relation of the produced and the producer, as effect and cause. He says that if the Vibhavas are to be regarded as the cause they must be regarded as the cause of agency or the efficient cause-Nimitta-karana. But in the case of Nimitta karana we know that an action may remain intact even when the efficient agent is destroyed. There cannot be any Rasa unless there is also the Vibhaava and the Anubhaava. The Vibhavas etc. cannot also be regarded as a communicative agent, for a communicative agent presupposes the existence of the thing to be communicated; but the Rasa does not

exist before. It can be lived through only when it is suggested by the Vibhavas and the Rasa has no other existence than being lived through and enjoyed. For, it should be remembered that the dominant emotions existing in the subconscious strata of the person are not themselves Rasas. They acquire that designation only when they are aesthetically presentable and enjoyable. (V111:66) .

Bharatha has also given a detailed account of the “sthayi bhavas” in his Natyasastra. As the sthayi bhavas are the permanent emotions inherent in man, they can be converted into the corresponding rasas by means of proper histrionic representations like, *angika* (gestures), *vacika* (verbal utterances), *aharya* (proper embellishments), and *sattvika*, (temperamental qualities). As they are the basic emotions that permeate the entire human nature, they are also called *chittavrittis*.

The eight sthayi bhavas mentioned by Bharata, their corresponding rasas, and their English equivalents are as follows: *Rati*- Love, *hasa*-laughter, *soka*-sorrow, *krodha*-anger, *utsaha*-enthusiasm, *bhaya*-terror, *jugupsa*-disgust, *vismaya*-astonishment. Since Bharatha had not mentioned the *shanta rasa* or its *sthayi bhava*, almost all the later Sanskrit aestheticians have come out with their own interpretations as to its sthaya. *Udbhata*, the first writer on *shanta* is silent on this point but some critics, who are particular to restrict the number of bhavas to forty- nine, the auspicious number fixed by Bharatha, consider *nirveda* as its sthaya. But it is only a transient bhava, and as such it can never develop into a rasa. After much deliberations on this subject extending through centuries, the Indian aestheticians have made *shama* the sthaya of *shanta*.

The vyabhicari bhavas or transient feelings are cultivated, not inherited so they are regarded as incapable of independent existence. They arise in the course of maintaining and developing the basic mood; they are the ancillary emotions which are determined by the basic mood and which in turn reinforce it. The vyabhicari bhavas are thirty- three in number, and Bharatha has described them in detail through his *Natyasastra* .The thirty three vyabhicari bhavas mentioned by Bharatha are:1.Nirveda -despondency, 2. Glani - weakness, 3.Sanka- suspicion, 4.Asuya - envy, 5.Mada- inebriation, 6.Srama- exhaustion, 7.Alasya - lethargy, 8.Dainya - depression, 9.Cinta - anxiety, 10. Moha - delusion, 11.Smrti –recollection, 12.Dhrti- fortitude, 13.Vrida - bashfulness, 14.Capalata - inconstancy, 15.Harsa- joy, 16.Avega - excitement, 17.Jadata - stupefaction, 18.Garva - arrogance, 19.Visada- despair, 20.Autsukya - impatient curiosity, 21.Nidra - sleep, 22.Apasmara - loss of memory, 23.Swapna -dreaming, 24.Prabodha -awakening, 25.Amarsa - indignation, 26.Avahittha - dissembling, 27.Ugrata - cruelty, 28.Mati - self assurance, 29.Vyadhi - sickness, 30.Unmada - madness, 31. Marana - death, 32.Trasa - fright, 33.Vitarka - deliberation.(72)

The emotions are also manifested by the involuntary states called sattvika bhavas. The sattvika bhavas are the physical, involuntary, and spontaneous changes like blushing and perspiring which arise as a result of experiencing the emotions. The sattvika bhavas arise from the sattva or sincerity. The bhavas and rasas are inextricably intertwined in a literary work and it is impossible for the one to exist without the other.The eight sattvika bhavas mentioned by Bharatha are: 1.Stambha - stupefaction, 2.Sweda - perspiration, 3.Romancha - horripilation, 4.Swarabhanga -disturbance of speech, 5. Vepathu- trembling, 6.Vaivarnya - change of colour, 7.Asru - tears, 8.Pralaya - fainting.(7)

The four primary sentiments mentioned by Bharatha are the *sringara*, the *raudra*, the *vira*, and the *bibhatsa*, and the other four arise out of these basic sentiments. The *sringara rasa* has *rati* or love as its *sthayi bhava*. It has two forms, love in union or *sambhoga* and love in separation or *vipralambha*. The *vibhavas* of love in union are the pleasant seasons, fragrant garlands, beautiful ornaments, pleasant objects, beautiful locations, and people, who are young and charming. The *anubhavas* of love in union are the clever movement of the eyes, rising of the eyebrows, sidelong glances, and the sensuous movement of the limbs. Its *vyabhicari bhavas* encompass all the other transient states, excluding death, fear, indolence, cruelty, and disgust. *Vipralambha sringara* is presented through appropriate *anubhavas* like indifference, languor, fatigue, fear, jealousy, yearning, drowsiness, sleep, insanity, fainting, and death.

Mirth or laughter is the *sthayi bhava* of *hasya*. The *vibhavas* of this sentiment are unseemly attire, misplaced ornaments, quarrel, defective limbs, and irrelevant words. The *anubhavas* of this state are the throbbing of the nose, widening of the eyes, biting the lips, perspiration, change of colour of the face, and holding the sides of the body in a state of mirth. The *vyabhicari bhavas* associated with *hasya* are indolence, dissimulation, drowsiness, sleep, envy, and dreaming.

The *karuna rasa* has sorrow as its *sthayi bhava*. The determinants of this sentiment are curse, distress, downfall, calamity, separation from the dear ones, death, murder, and captivity. The *anubhavas* of this state are shedding of tears, lamentation, change of colour, drooping of limbs, and suffocation. The *vyabhicari bhavas* of this *rasa* are indifference, languor, illusion, sadness, lethargy, fear, death, paralysis, weeping, dejection, epilepsy, and trembling.

The sthayibhava of the raudra rasa is krodha. The vibhavas associated with this sentiment are anger, rape, abuse, insult, jealousy, threat etc. The anubhavas of this state are red eyes, knotted eyebrows, biting of lips, and the vigorous rubbing of hands. The vyabhicari bhavas associated with this rasa are wrath, energy, enthusiasm, fury, perspiration, trembling, and restlessness.

The vira rasa associated with energy and enthusiasm, is always approximated with men of high rank. The vibhavas of this state are presence of mind, diplomacy, perseverance, discipline, valour, aggressiveness, power, and humility. It is depicted through the anubhavas like firmness, patience, heroism, charity, and diplomacy. The vyabhicari bhavas of this sentiment are contentment, sound judgment, pride, energy, ferocity, indignation, and remembrance.

The bhayanaka rasa has its origin in the dominant state of fear. The vibhavas of this state are hideous noises, sights of ghosts, panic, anxiety, staying in an empty house, sight of death, and the captivity of dear ones. The anubhavas of this state are the trembling of the hands and feet, change of colour, and the loss of voice. Its vyabhicari bhavas are paralysis, perspiration, fear, stupefaction, dejection, agitation, restlessness, inactivity, epilepsy, and death.

Jugupsa is the sthayi bhava of bibhatsa rasa. It is stimulated by determinants like the report of unpleasant things, discussion of offensive matters, and vulgar sights. It is represented by the consequents like immobility, spitting, drooping mouth, and the contracting of the limbs in disgust. The transient states associated with this sentiment are, epilepsy, delusion, agitation, fainting, sickness, and death.

The adbhuta rasa has wonder as its sthaya bhava. The vibhavas associated with this sentiment are the sight of heavenly beings, fulfillment of the cherished desire, and vision of supernatural things. Its anubhavas are wide eyes, tears, perspiration, pleasant cries, and pleasant movements. The vyabhicari bhavas of adbhuta rasa are shedding of tears, paralysis, choked voice, horripilation, excitement, and fainting.

The implication of revaluation of this indigenous theory of rasa on practical criticism is obvious. Any sound literary principle must at the same time be so universal as to apply with equal force to the greatest epic as well as the shortest lyric of all languages and diverse cultural strata and the theory of rasa is in a position to fulfill these requisites. Practical criticism will have to analyze literary beauty in form as well as in content and such a study based on Indian aesthetics might to some considerable degree put an end to the blind adherence to the Western theories and to raise the prestige of Indian literary criticism itself. To test how valid the theory of rasa would be for an alien literature would entail the application of it to representative works in non-Sanskrit languages. Krishnachaitanya describes poetic experience as:

An experience of the psyche, of the human sensibility which, at least in response to the basic vicissitude's of man's life and destiny does not vary with the colour of the skin, eyes or hair. Therefore, the terms of its definition and analysis in any tradition must be capable of translation in the terms of the other traditions also. (*Towards an Enriched Heritage* 71)

The experience of complete beauty is possible only in art.. The aim of art is to secure a unique form of experience. There are two characteristics of this art experience.

The first is disinterestedness. Art enables man to grow so disinterested as to become unconscious of his private self. This experience is derived from the contemplation of beauty. The second characteristic is the realization of joy-the joy that knows no pain. The above aspects of art experience lead us to the ultimate goal of life-at-mananda [spiritual bliss]and rasanubhava [aesthetic enjoyment]

Idealization in a literary work should be done in such a way that it appeals to the readers emotions rather than his intellect. Moreover, idealization should bring about a transformation of common experience into general ones. Such an idealization resulting in the transformation of the particular into the general makes the reader neither believe nor disbelieve in the reality presented, but makes him feel entertained. Literature is the blend of content and form. Though content is generally equated with meaning, Indian aestheticians have, since the 9th century A.D. given it a new dimension, namely, the emotional character of the experience generating Rasa in the reader. The experience of giving rise to Rasa is not realized by content alone but by form too. In other words, Rasa is the conjoint effect of form and content in the reader or the spectator. The experience which art yields is essentially disinterested. Since disinterestedness is the very basis of morality, art is connected with morality. That is to say, art creates the ethical attitude in us. But this attitude is not one of detachment, it is an essentially active principle creating in the readers an aesthetic as well as ethical attitude. The attitude springs from within and is spontaneous. It marks a reaction to an imaginary or fictitious station. And as such the influence on the moral side of man may be very little.

Most aestheticians regard universalisation or sadharanikarana as a pre-requisite of aesthetic relish. Universalisation removes the veil of ignorance that covers the

mundane practical life and in its place there is a larger and deeper involvement. This involvement is marked by a feeling of detachment, which is called aesthetic distance. The experience of the enlarged common emotion in its essence without being restricted by the limitations of the day to day world is called universalisation or sadharanikarana. It is sadharanikarana that raises the feelings to the level of common enjoyment called rasa. Because of the power of universalisation the emotions presented in literature are freed from their personal limitations, they cease to be the emotion of particular individuals and become the common experience of all sensitive readers. The emotions are freed from the limitations of time and space and they are elevated and refined. When the ego is suppressed or absent, it is possible to enjoy even the painful emotions of pity and fear. Because of the power of universalisation, the ego is transcended. The feeling of universality makes even a painful emotion, an object of relish.

It would be relevant to analyze the reasons behind the perennial charm of the theory of rasa, when hundreds of new theories have disappeared after a short period. Rasa theory is a flexible theory capable of adaptation, and this willingness to change and the power of resilience has helped it to survive the onslaughts of time. The later Indian critics have substantiated the omissions in Bharatha's theorization to make it a vital theory capable of interpreting any literature. Most modern theories are compartmentalized and so they are not able to do justice to a work in its totality. But the theory of rasa wedded to all other literary elements is capable of evaluating a work in its totality right from the creation by a writer to its acceptance by the Sahridayas.

The compliance and subversion of all other literary components to rasa endorses the position of rasa as the soul of literature. V.K.Chari holds the view that the theory of

rasa still promises “to give a reasonably good account of what many people in all ages and countries have thought to be valuable in literature and also one that avoids the shortcomings of other competing theories”(*Sanskrit Criticism* 252). The Indian theory of rasa which is wedded to and encompasses all the different concepts like bhavas, gunas, dosas, riti, vakrokti, alamkaras, dhvani, anumana etc. may help to resolve the binaries of colonial/postcolonial, east/west, local/global dichotomies in poetic appreciation. This literary concept can pave new ways for interpreting and appreciating literature written by writers belonging to diverse cultures and traditions.

Chapter - 3

The Impact and Influence of Colors on Human Emotions

The impact and influence exerted by colors on human beings is so vast and profound that evades easy comprehension. Colors pervade and permeate the entire aspect of human existence. The purpose of art and literature is to experience an emotion and convey the same feeling to others using certain external indications. The omnipresent hold of colors on human life is manifested in the following remark made by Joann Eckstut and Arielle Eckstut in *The Secret Language of Color* “Anyone who claims to be an expert on color is a liar. A true expert would have to be fluent in physics, chemistry, astronomy, optics, neuroscience, geology, botany, zoology, human biology, linguistics, sociology, anthropology, art history, and cartography”(8).. They also state that:

Our unique ability to see not only many colors, but also to perceive what we see, has an almost constant effect on how we take in the world. Although we are largely unaware of these perceptions, our world is mapped out for us through color, and at every moment these colors are helping to guide our very next moves. We’ve used color, abused color, loved color, hated color, but we are always surrounded by it, always wrapped in it, even if it’s only by our skin. (198)

Human beings have the unique power of communicating their thoughts, feelings and emotions through colors and they are well aware of the role played by colors in inducing a mood. This aspect of colors is illustrated by Eckstut through the following remark “color perception works in tandem with other brain processes to help us decide

what to eat, whom to fear and whom to be attracted” (210). The entire human emotions are guided and motivated to a great extent by the power of colors. In the entire aspect of human life starting from clothing, interiors, landscape, and the scenic beauty of nature colors can change the mood from sad to happy, from confusion to intelligence, from fear to confidence. Barbara Brown was well aware of the interconnectedness between brain stimulation and colors and the various patterns of brain activity recorded when the human body is exposed to different colors, but she is not able to give a definite answer, as to which is the foremost influence “Whether feelings about color modify brain waves or whether brain waves are first affected by colors and the feelings developed later” (Qtd in *Color & Human Response* 80-81).

The chemistry of colors is related to its chemical makeup. The particular combination of elements like carbon, oxygen and hydrogen determined the absorption and reflective properties of a color. As wavelength and frequency corresponds to energy the effect of color on human beings can be regarded as the transference of energy through matter in the form of a wave (*The Secret Language of Color* 23).

Even in electromagnetic spectrum different colors have different functions. Faber Birren holds the view that “rays of coherent visible light (often red) have been concentrated in the laser beam and used to strike the moon, establish channels of communication, cut metals, drill holes in diamond---“(14). He also holds the view that green light has a therapeutic value. Dr. Mark Sircus who has conducted exhaustive researches on the impact of color and light on human behaviour has come out with the statement that “Light, heat, color, warmth, energy, electrons, bio-photons, electricity, electromagnetism all interact with the water that is in us. In fact, not only do these forces

interact with us they are us”(6). Alexander Schauss, director of the American Institute for Biosocial Research also firmly believes that colors have a direct physiological impact. Schauss has emphasized the point that electromagnetic energy of color, interacts in some still unknown way with the pituitary and pineal glands and the hypothalamus, deep in the brain, These organs regulate the endocrine system, which controls many basic body functions and emotional responses, such as aggression. (Qtd in Color and Human Response 13).

Felix Deutsch a physician who has carried out exhaustive researches on the impact of colors on human behaviour strongly endorses the emotional effects of colors on human beings .He is of the view that “Every action of light has in its influence physical as well as psychic components” (Qtd in Faber Birren 46). The effect of light and colors on human body is mainly through the brain and eyes. The impact of colors on human life manifests both at the physical and emotional levels. The experimental results conducted by Chan Jean Lee and associates with simple colors suggest “that signaling the same attitudinal tone is enough to change people’s liking for aesthetic stimuli when they are experiencing an emotion to which they are committed”(32). Maier Elliot is of the view that“ Colors carry information that goes far beyond esthetics, owing to their emotionally meaningful associations. They can therefore transcend their physical nature and take on a psychological meaning”(98).

Professor Wohlfarth who has conducted exhaustive researches on the impact of colors on children has underlined the impact of different colors on the emotions of children. The long-wavelength colors like red and yellow are more arousing than short-wavelength colors like blue and green. Experimental studies that have used physiological

measures have shown that red and yellow were indeed more arousing than blue and green. When light strikes any colored object, the object absorbs only the wavelengths that exactly match its own atomic structure and reflects the rest to the observer. When light strikes the human eye, the wavelengths do so in different ways, influencing the perceptions. The hypothalamus is the part of the brain governing the human hormones and endocrine system, when light hits the retina it is converted to electrical impulses that are then transmitted to the hypothalamus for interpretation. As a result, Professor Wohlfarth reported, the children's mean systolic blood pressure dropped from 120 to 100, or nearly 17 percent, The children were also better behaved and more attentive and less fidgety and aggressive, according to the teachers and independent observers. When the room was returned to its original design, however, the readings gradually increased and the children once again became rowdy. Professor Wohlfarth said the minute amounts of electromagnetic energy that compose color light affect one or more of the brain's neurotransmitters, chemicals that carry messages from nerve to nerve and from nerve to muscle. Several experiments on rats and other small mammals already have provided evidence, he said, that light striking the retina influences the pineal gland's synthesis of melatonin, a hormone that has been found to help determine the body's output of serotonin, a neurotransmitter. (Volume 3, No. 1, 10).

There are four psychological primary colors - red, blue, yellow and green. They interact respectively to the body, the mind, the emotions and the essential balance between these three colors must be studied in real contexts because they are experienced in environments where complex patterns interact with perceptions and behaviour. Colors have a visual impact in humans to the categories called red, green, blue, and others. The

seven colors of the spectrum are produced by light waves of varied lengths that reflect off tangible animate and inanimate objects . Light and color are simply a matter of vibrational frequency. Chromatics, the science of color, is the study of this relationship .The narrow band of energy that the human eye can detect extends from 380 nm at the red end to 760 nm at the violet end. Sunlight produces all color wavelengths. When human eyes interpret the wavelengths of light reflected from an object, they see color (Marberry 15).

The impact of colors on human beings is summarized by, Angela Wright in the following words:

Over millions of years of evolution humans have developed an innate reaction to color as a survival mechanism. An example of this is our differing reaction to green apples and green meat. Just like our differing reactions to the smell of fresh and rotting fruit, these are instinctive. Taking this further, we react to the seasons and, along with changes in temperature and daylight, color is a principal signal that the seasons are changing, so we are affected by the colors that surround us, and adapt our behaviour. (“A Theory of Colour Psychology and Colour Harmony ”).

The primary colors are the three basic shades red, blue, and yellow. These colors cannot be created by mixing others, and these form the basis of all the other shades of colors which they generate. There are four basic primary colors-red, blue, yellow and green and the psychologists have proved that these primary colors can influence the body, minds and the emotions. Red is the color having the longest wavelength-it acts as a strong stimulant, and since it is an intensely physical color it can stimulate the heart beat and

pulse rate and it is suggestive of emotions like physical courage, strength, warmth, energy, basic survival, 'fight or flight', stimulation, masculinity, excitement, defiance, aggression, visual impact, strain etc.

According to Wright there are four psychological primary colors: red, blue, yellow, and green. They relate, respectively, to the body, the mind, the emotions, and maintain the essential balance between these three. The emotional effects of the basic colors are as follows:

Red color has the longest wavelength and due to its longest wavelength red is a powerful, strong, and very basic color. It has the property of appearing to be nearer than it is and therefore it grabs people's attention first. It may activate the "fight or flight" instinct. Pure red is the simplest color, with no subtlety. It is stimulating and lively, very friendly. At the same time, it can be perceived as demanding and aggressive. Although the red colored spaces have courage, strength, warmth, energy, basic survival, "fight or flight," stimulation, masculinity, excitement effects on people. Defiance, aggression, visual impact, and strain are among the negative impacts of red color. (*A Theory of Colour Psychology and Colour Harmony.*)

The effect exerted by colors on a person is more psychological and emotional rather than physiological. The changes produced by color effects are always temporary. M. Luckiesh after conducting exhaustive researches on colors and light arrived at the conclusion that yellow color is the color of maximum selectivity. The psychological study of color on human personality is primarily based on the mental and emotional effects colors have on sighted people in all facets of life. There are some very subjective

pieces to color psychology as well as some more accepted and proven elements, and there will also be variations in interpretation, meaning, and perception between different cultures. Yellow is thought of as joyful, outgoing, open, and friendly. Psychologically, yellow is the strongest color. In color-mood association studies, yellow is associated with comedy, a happy mood, and playfulness. Yellow ribbons have been used as a sign of hope and optimism since the nineteenth century .Psychologically, yellow is the strongest color, it is about emotions, self esteem, and creativity. Yellow as a color lets the sunshine in and it induces warmth to human personality(33-34)

According to Luckiesh the yellow wavelength is relatively long and essentially stimulating. In the case of yellow color the stimulus is powerfully emotional, therefore yellow is the strongest color, psychologically. Yellow color is capable of stimulating human confidence and self esteem ; it is the color of confidence and optimism. Too much of it, or the wrong tone in relation to the other tones in a color scheme, can cause self-esteem to plummet, giving rise to fear and anxiety. It creates positive emotions like optimism, confidence, self-esteem, extraversion, emotional strength, friendliness, creativity., “yellow light is capable of giving pleasure and is beneficial in certain treatments of mental disorder, it can focus perfectly and it is psychologically pleasing” (35).

Blue color has a soothing effect on human mind and is essentially regarded as a soothing color. Strong blue color stimulates clear thought and lighter, soft blues can calm the mind and aid concentration. Consequently blue is regarded as a serene and mentally calming color. It is the color of clear communication..Wright holds the view that Blue encourages intellectual activity, reason, and logical thought. It is the color of the intellect.

In the same evidence about raising blood pressure with red, blue is deemed to lower the blood pressure. Certainly, it is a soothing, calming color, encouraging reflection. Nature uses it in the sky and the sea. (“A Theory of Colour Psychology and Colour Harmony ”).

Green color is the color of nature, prosperity and enrichment The presence of green, indicates the presence of water, freedom from want, lack of famine, so people even from the primitive level were attracted to the green color.. It is the color that instills, trust, efficiency, serenity, duty, logic, coolness, reflection, calm harmony, balance, refreshment, universal love, rest, restoration, reassurance, environmental awareness, equilibrium, peace. The ennobling and sustaining influence of green color is revealed through the following remark made by Joann Eckstut and Arielle Eckstut “Money .Inexperience. Paradise. Jealousy. A knack for gardening. All of these we identify with the color green. And yet green is so much more fundamental. From the Amazon jungle to the concrete jungle,it’s nature’s greenery that supplies us with the ability to live and breathe”(*The Secret Language of Color* 145)

The psychological implications of black color are considerable , because it is a color in which all colors are totally absorbed. It creates protective barriers, as it absorbs all the energy coming towards a person and it engulfs the personality in negative feelings . Black is essentially an absence of light, since no wavelengths are reflected and it can, therefore be menacing; it makes people afraid. Black creates a perception of weight and seriousness.

According to Angela Wright , the psychology of color works as follows:

When light strikes the eye, each wavelength does so slightly differently.

Red, the longest wavelength, requires the most adjustment to look at it,

and therefore appears to be nearer than it is, while green requires no adjustment whatever, and is therefore restful. In the retina, these vibrations of light are converted into electrical impulses which pass to the brain—eventually to the hypothalamus, which governs the endocrine glands, which in turn produce and secrete our hormones. In simple terms, each color (wavelength) focuses on a particular part of the body, evoking a specific physiological response, which in turn produces a psychological reaction. Particular colors have very different effects on each individual. Response to a color may be influenced by a number of factors such as the body's need for a specific color, a sad or happy memory associated with a color, family history, or current trends (“A Theory of Colour Psychology and Colour Harmony”).

Colors play a dominant role in influencing and conditioning human existence. Colors not only influence human existence but plays a powerful and vital role as they affect the compounds of the body, metabolic processes, the cells, tissues and even the very behaviour of human existence. W.F. Ganong is of the view that “environmental light can penetrate the mammalian skull in sufficient amount to activate photoelectric cells imbedded in the brain tissue (962)

Colors and the color rays coming from light are essential for the human beings to lead a normal life and it affects the physiological and psychological systems of human body through all the important sense organs like skin, eyes and even brain itself. Colors are capable of causing a series of physiological changes in the body. Body temperature can drastically increase or decrease due to the presence of certain colors, it can lead to

the increase and decrease secretion of certain hormones that guide the very pattern of human behaviour. A life devoid of color is drab and useless as the lack of color can lead to mental inertia, lethargy and mental dullness.

The experiments conducted by C.E.Ferree have proved beyond doubt that colors can bring about psychological and physiological changes in human beings. It can lead to muscular changes and muscular tensions, he discovered that red color increased muscular tension from a normal 23 units to 42. Orange color increased the units to 28, and blue to 24 all above the normal “ in the main however, the warm hues of spectrum are stimulating, while the cool hues relaxing (Qtd in *Color and Human Response* 45)”. Great importance is given to emotional responses to color by psychologists and physiologists and it is a matter of serious study having both emotional, psychological and physiological dimensions. John Ott is of the view that “ Behind the psychological responses to color are more basic responses to specific wavelengths of radiant energy”(Qtd in *Color and Human Response* 76).

The intensive and almost clinical experiments conducted by Deutsch has proved that colors can bring about a change in the vascular system of the body and it can bring about a significant alteration in human feelings and emotions. The experiments conducted by Deutsch have proved beyond doubt that red color can produce an elevation of blood pressure and a quickening of pulse rate. He substantiates the changes happening in the human body through the following remark:

The emotional excitements which are recognized through changes in blood pressure, pulse-frequency and rhythm, are brought forth through association. Green may recall nature, mountains, lakes. Red may recall the

sunset, the fire place. These superficial associations lead to deeper lying memories, which explain the affective emphasis of the attitudes toward the colors.,(Qtd.in *Colors &Human Response* 47)

Kurt Goldstein a leading exponent, writer and researcher on color therapy has mentioned in his book *The Organism*, the diverse therapeutic, psychotherapeutic and psychological aspects of color. He is of the view “It is not a false statement if we say that a specific color stimulation is accompanied by a specific response pattern of the entire organism”(qtd.in *Color &Human Response* 47). The response to color stimuli is a deep seated psychological and physiological response .Faber Birren through the exhaustive researches conducted by him has established beyond doubt the interconnectedness between colors and healing, “Men have believed in the healing power of color since the beginning of the recorded time and probably before, The reason is quite simple: sunlight sustains all life, and there is death without it”(*Color &Human Response* 83). Dr. Max Luscher, a professor of psychology at Basle University in Switzerland, claimed that color preferences indicated the state of mind and glandular balance, and could be used for physical and psychological diagnosis. In 1948 he published his Luscher Color Test which offered doctors and psychologists a quick and easy and reliable test using color (*The BioMat Book: Far-Infrared and Vibrational Medicine* 232)

The question that has puzzled many researchers is the interconnectedness between colors and human brain. The psychological response to color is intricately linked to many factors like astral body, corona discharge, psychotronics etc. The vital question concerning the impact of brain towards color is that whether brain is modified

by colors or the colors modify brain. Barbara Brown has tried to give a rational explanation for this by saying:

Whether feelings about color modify brain waves or whether brain waves are first effected by colors and feelings developed later. Brain – wave activity was recorded when different colors were exposed. She concluded that the overlap between the associations between color and feelings states and the association between color and brain waves....suggests the possibility that subjective activity relating to colors may originate from the same underlying neuronal processes as do the brain waves—I tend to favor the concept that the brain cell, neuronal, response to color came first, since in my studies and those of others the brain electrical response to red is one of alerting or arousal, whereas the brain electrical response to blue is one of relaxation .This happens in animals as well as man.(Qtd in *Color and Human Response* 81)

The entire world is a phantasmorgia of colors and colors exert a great impact on heartbeat, respiration, blood pressure . This aspect of the impact of colors on human emotions has been proved beyond doubt both by psychologists and researchers.. An examination of the history of mankind proves that human traditions, symbolisms, mythology and superstitions are in one way or other linked to colors. Though the ancient physicians were unaware of the scientific rationale behind colors, color therapy had played, a dominant role in ancient healing systems. The great charm of colors on human body system has been a part of the ancient medical system and all the medical systems, in the past gave importance to light therapy and color therapy in the healing process. This

traditional notion can be studied from a new scientific dimension in the present age. It is scientifically proved in the present age that colors have a therapeutic power and it can change and alter the physiological moods and psychological moods of an individual..

Cognitive psychology has evolved as a dominant branch of the study of human psychology, and it pervades all areas of psychological study including clinical assessment, developmental, social, comparative and physiological psychology. The exhaustive studies conducted by the scientists about the behavioural patterns of human beings, included physiological measurement of bodily systems, including the brain and its influence on emotions. The impact of different colors bring about changes in the autonomous nervous system including the rate of heart beat, blood pressure, respiration rate and skin conductance.etc., According to Ronald T. Kellog the ability to “perceive depends on pattern recognition-categorizing objects and events detected in the environment by matching their preliminary representations with patterns stored in long term memory”(41).

The human mind can have an awareness of the environment through the sense of perception, all inputs from the environment first reaches human memory. Perception is the outcome of the processes that construct mental representations of the information available in the environment. Ronald T. Kellog holds the view that :

Without structured patterns of light in the visual field, it would be impossible to see in the sense of both detecting the stimulus and recognizing its identity. The detection process begins with the transduction of electromagnetic energy by photoreceptors in the retina of the eye. Photoreceptors are neurons specialized to convert visible light

into electrical signals that may be propagated by the neurons of the visual system. The human visual system has evolved to construct color differences from the variations in wavelengths in the visible spectrum. Long wavelengths are red, because of the manner in which the brain processes the light and represents it differently from the short wavelengths of blue or violet.(36)

Colors can greatly influence human emotion and Kurt Goldenstein after conducting exhaustive researches on the therapeutic and psychotherapeutic values of colors has come out with significant explanations about the human influences to color.. In art therapy color is often associated with a person's emotions. Colors play a dominant role in influencing a person's mental or physical state. For example, studies have shown that red color revealed an increased heart rate, which will then lead to additional adrenaline being pumped into the blood stream. There are also commonly noted psychological effects of color as it relates to two main categories: warm and cool. Warm colors – such as red, yellow and orange – can spark a variety of emotions ranging from comfort and warmth to hostility and anger.

Cool colors – such as green, blue and purple – often spark feelings of calmness as well as sadness. The power of green color in strengthening relationships and healthy ambience is evident from the remark of Ekstut “If there is one hue that dominates in the plant kingdom, however, it's life sustaining green-life on our planet is, quite literally, green dependant”(121).Red may be suited to produce the emotional background out of which the ideas and action will emerge, in green these ideas will be developed and the actions executed.Red color can create mental disturbance in patients. “The stronger

deviation of arms in red stimulation corresponds to the experience of being disrupted, thrown out abnormally attracted to the outside world. It is only another expression of the patients feeling of obstruction, aggression, excitation by red”(Faber Birren 48)

Colors can perform a multitude of roles and can affect a person’s emotions, energy level, and sense of order, or disorder. From time immemorial colors are frequently used to describe emotions and the expressions such as green with envy, red with rage, and being in the blues are used to describe human emotional states . Angela Wright holds the view that from ancient period, it has been thought that long wavelength colors – reds, oranges, and yellows - are stimulating and shorter wavelength colors – greens, blues, and purples – are soothing. Furthermore, long wavelength colors are deemed warm and short wavelength colors cool. (“A Theory of Colour Psychology and Colour Harmony ”). Henner Ertel, director of Munich's Gesellschaft für Rationelle Psychologie , firmly believes that colors have "a decisive influence on the child's mental performance," (“Behavior: Blue is Beautiful”).

Clive Bell the leading British art-critic has given great importance to the harmony of colors in kindling an aesthetic experience. He holds the view :

that the emotional responses which consist mainly in a disinterested pleasure are caused by the colors, outlines and shapes of the objects painted,the majestic form of architectural structures, the designs of flower vases, the prints of the textiles, the contours of the sculpted images and all; such aspects which are associated with form only.(24).

Clive Bell has underlined the importance of colors, in kindling aesthetic experience through his remark “Lines and colours combined in a particular way, certain forms and relations of form stir our aesthetic emotions”(23).

The German poet Goethe has given great importance to the study of color. Goethe was well aware of the aesthetic and emotional influences of color. He believed that all colors were derived from lightness and darkness and that the two basic primaries were yellow and blue. Goethe was very fond of green color according to him “the eye experiences a distinctly grateful impression of this color. If the green were perfectly balanced between yellow and blue, the beholder neither has the wish nor the power to imagine a state beyond it. Hence for rooms to live in, the green color is most generally selected”(Quoted in Faber Birren 56). All creative artists from ancient times have had strong feelings about colors and they are well aware of the importance of colors in creating an emotional mood .A detailed analysis of the impact of colors on human beings and the psychological effects of different colors on human emotions and their relevance in literature will definitely enhance the importance given by Bharatha to colors in his theory of rasa.

Chapter - 4

The Rationale Behind the Allotment of a Particular

Color for a Particular Emotion by Bharathamuni.

A strong psychological and physiological rationale is manifested in Bharatha's allotment of a particular color for a particular emotion. The developments that have taken place in the field of colorgenics stress the point that the body chemistry is responsive to certain colors. The different colors have specific frequencies affecting changes in the physical and mental constitution of human beings. The terms beautiful and pleasant play a dominant role in the appreciation of art and literature. The various factors that give emotional satisfaction to human beings come under the domain pleasant and it includes tastes, smells, sensations..Pleasure is a concomitant factor which accompanies the effect of beauty and hence it can be considered as one of the prime factors of aesthetic appreciation and colors play a dominant role in giving soothing emotional satisfaction and herein lies the significance of colors in art and literature. .

As the red color is capable of pumping up and stimulating the nervous system, it is accepted as a vibrant stimulant and Bharatha with great psychological acumen has allotted it to a fiery dynamic emotion like ferocious or raudra. Yellow color which has the power of stimulating the nervous system and the intestines is associated with adbhutha rasa. As black color causes both mental and physical depression, Bharatha has allotted it to bhayanaka rasa. Gray regarded as a neutral color is the color of karuna rasa. Green color which balances and soothes the body functions and stimulates the pituitary gland is the color of shringara rasa and white is the color of mirth. Orange heralded as a social

color, is cheerful and luminous and vibrant is the color of vira rasa Blue which is regarded as the color of extreme polarities is the color of bibhatsa rasa.

The effect of color on human emotions has a dominant role in art and literature especially in the field of performing arts. Colors can change the environment and through the changed appearance of the environment or the background the individual is lifted out of reality..He is elevated to another world the world of aesthetic appreciation. The self-evident claims about the supremacy of the theory of rasa are a legion, and since the main objective of this thesis is to analyze the rasa theory on the basis of colorgenics, it would be quite relevant to analyze the reasons for the perennial charm of this theory.

According to the psychologists, what distinguishes the inherent emotions from the other psychological states are the physiological aspects of the emotion. The Psychologist Ernest R. Hilgard is of the view: “Understanding the bodily processes is important in the understanding of motives and emotions”(7). The great emphasis given by Bharata to anubhavas and sattvika bhavas illustrate the fact that he was well aware of the physiological manifestations of emotions. The physiological response to the basic emotions is almost universal and transcends cultures. The researches conducted by Ekman and Friesen have substantiated beyond doubt that people living in widely separated geographic areas seem to demonstrate similar facial expressions in similar emotion provoking situations. (11)

Human emotions are complex. Human beings express positive or negative reactions to external and internal stimuli. According to modern psychology, emotion, behaviour and cognition influence each other. Thus, each emotion distinctly affects human motivation, nervous function, learning, physical acts, physiological arousal and

communication with others. Sadness, for instance, is an emotion that causes a person to cry and withdraw from social circles, while surprise is an emotion that causes a person to sigh and raise their eyebrows, and the emotion of anger causes trembling and aggressive behaviour.

Robert Plutchik, Paul Ekman, Wallace Friesen, Carrol Izard and Silvan Tomkins are among the names that have made significant contributions to the study and classification of human emotions. They believe that certain emotions are basic or primary. According to the psychologist Paul Ekman, the basic emotions are: sadness, happiness, anger, fear, disgust, and surprise. These emotions combine in different ways to form other emotions, including compassion, boredom, embarrassment, rage, hunger, and more.(10)

The physiological response to the basic emotions is almost universal and transcends cultures. The researches conducted by Ekman and Friesen have substantiated beyond doubt that people living in widely separated geographic areas seem to demonstrate similar facial expressions in similar emotion provoking situations. They are uniform in their verdict that cultural influences cannot alter these basic facial expressions as these occur even in the neonates and in the blind. Ekman and Friesen have given a systematic account of the facial changes that occur as a result of an emotion: “The facial muscles pull the skin, temporarily distorting the shape of the eyes, brows, and lips, and the appearance of folds, furrows and bulges in different patches of skin. These changes in facial muscular activity are brief, lasting a few seconds; rarely do they endure more than five seconds or less than 250 ms.”(*Facial Action Coding System: A Technique for the Measurement of Facial Movement* 10) .

W. E. Rinn, who has conducted exhaustive studies in the neuro-anatomy of facial expressions has arrived at the assumption: “Facial expressions are the result of the movements of the facial skin and the connective tissues - fascia caused by the contraction of one or more out of the forty- four bilaterally symmetrical facial muscles and muscle activation is necessary for these facial configurations”(65-66).

Norman. L. Munn has also given a scientific explanation for the physiological changes occurring in a person as a result of an emotional change:

An emotionally aroused individual’s heart pounds, his gastric secretions are checked, and his secretion of adrenalin is accelerated all because his sympathetic nervous system has assumed control. Also the sympathetic decision causes the blood vessels of the intestines and stomach to constrict, permitting more blood to flow to the arms and legs in anticipation of fight or flight.(394)

The psychologists are of the opinion that even in the first hours of life one can see a fixed pattern in the stimuli of each basic emotion.. These are connected to the four mental conditions like vikasa caused by the unfolding of the mind, vistara caused by its expansion, kshobha caused by its agitation, and vikshepa caused by its oscillating movement .Bharatha was well aware of the power of colors in influencing human emotions.

Even in the description of the alanbana and uddipana vibhavas mentioned by Bharatha there is the rational of colors. This importance given by Bharatha in depicting the emotions is in concordance with the view of Deutsch:

The emotional excitements which are recognized through changes in blood pressure, pulse-frequency and rhythm, are brought forth through association. Green may recall nature, mountains, lakes. Red may recall the sunset, the fire place. These superficial associations lead to deeper lying memories, which explain the affective emphasis of the attitudes toward the colors. (Qtd in *Color & Human Response* 46)

In chapter twenty one of his *Natya Sastra* Bharata has given a detailed account of Aharya which is related to dress and makeup and the elaborate descriptions of these elements is an indication of the fact that Bharata was well aware of the power of colors in stimulating a particular emotion. Bharata has taken great pains to elaborate in detail the type of ornaments, costumes, garlands etc, that should be worn by characters according to the roles allotted to them. The bhavanukarana or the imitation of the emotional states become clear by the impact of colors.

The visual impact of color is very important in all arts, especially in performing arts and Shyamula Gupta has highlighted the importance of colors in enhancing the visual effect “The visual form is obviously very important in arts like painting, sculpture and architecture and the secret of their aestheticity and power of appeal to the visual faculties lies in the poise and posture, color scheme, balance and symmetry etc”(141).

Ivan Magrin has highlighted the importance of colors in films and theatre through the following remark:

Colors are perceived in film and theatre as the result of several components: set, props, costumes, make up, lighting, and each of these components has an impact on the overall color perception. Colors have a direct impact on the emotions of the viewer and are usually chosen for that purpose. There are some aesthetic rules that can be used as guidelines and some cultural differences that can be taken into consideration. But in the end, much of the creative process happens in the subconscious mind and is the result of several factors: what directors know about colors, their culture, their experience in using colors, the questions they ask themselves about colors, the possibility of them having a dialog about colors with their lighting designer or their cinematographer, the show or the film they are directing and its needs in terms of color. (*The Use of Color in Theatre and Film*)

Suchithra Harmalkar is also aware of the dominant role played by colours in performance arts:

Theatre is a collaborative form of fine art that uses live performance to represent any real or imagined script. Since theatre is a complex art that involves a broader and wider perspective of a story, colors have played a major role be it make up, costumes or sets. To bring a story live, it is important to create an ambience similar to the actual scene so that the audience can visualize and connect to the script. (1-2)

Human emotions are complex. They express positive or negative reactions to external and internal stimuli. According to modern psychology, emotion, behavior and cognition influence each other. Thus, each emotion distinctly affects human motivation,

nervous function, learning, physical acts, physiological arousal and communication with others. Sadness, for instance, is an emotion that causes a person to cry and withdraw from social circles, while surprise is an emotion that causes a person to sigh and raise their eyebrows, and the emotion of anger causes trembling and aggressive behavior and colors play a significant role in stimulating the emotions..

Color is ubiquitous in an individuals' perceptual experience of the world. In this context it is interesting to observe that Bharatha, has related every rasa to a particular color. It is very much evident from the above discussions that the sense organs like eye and ear which are sensitive to colors and sounds, can produce different kinds of emotions and even "philosophical aesthetics, which is today brimming with intellectual ferment, originated as a plea for the value of sensibility "(Kai Hammermeister 4).

The Indian aestheticians were able to provide a satisfactory explanation for the mental changes, involving the primary emotions like love, heroism, horror, and fury. These are connected to the four mental conditions like vikasa caused by the unfolding of the mind, vistara caused by its expansion, ksobha caused by its agitation, and vikshepa caused by its oscillating movement.

The colors given by Bharatha for each sentiment or rasa is an indication that he was aware of the importance of colors in the realization of emotions. Even the vibhavas mentioned by Bharatha for each sentiment follows a definite color pattern. This is evident from the table given below . (*The Natyasastra* 75) The Indian aestheticians were able to provide a satisfactory explanation for the mental changes,

involving the primary emotions like love, heroism, horror, and fury. These are connected to the four mental conditions like vikasa caused by the unfolding of the mind, vistara caused by its expansion, ksobha caused by its agitation, and vikshepa caused by its oscillating movement.

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RASA	BHAVA	MEANING	COLOR
Shringar(Erotic)	Rati	Delight	Shyama(green)
Hasya (humorous)	Hasa	Laughter	Sita (white)
Karuna (Pathetic)	Shoka	Sorrow	(Kapota)Grey,Dove colored
Raudra (Terrible)	Krodha	Anger	(Rakta)Red
Vira(Heroic)	Utsaha	Heroism	Gaura(wheatishbrown,pale orange)
Bhayanaka(Fearful)	Bhaya	Fear Black	Krshna(Black)
Bibhatsa(Odious)	Jugupsa	Disgust	Nila(Blue)
Adbhuta(wonderous)	Vismaya	Wonder	Pita(Yellow)
Shanta (Peaceful)	Calm	Peace	White

Bharatha has given a detailed account of the processes involved in the realization of sringara rasa. The alambana vibhavas or the hero and heroine should be young and

handsome and the uddipana vibhava assigned to sringara rasa like the gardens, meadows and pleasant seasons take on a green color. The predominance of the green background sprinkled with diverse colored flowers create a suitable background for the stimulation of the emotion of love and it can lead to the erotic sentiment. This beautiful ambience along with the anubhavas or consequents, like clever movements of the eye, sensuous movement of the limbs can kindle the sthayibhava of love in the Sahridaya to result in sringara rasa.

According to colorgenics green is acclaimed as the color of nature and earth. It restores balance and harmony in a person and exerts a soothing influence on mind and body. It has both an energizing and soothing influence. It also has esoteric and charming qualities. From grass to leaves, to other verdant vegetation, the color green is closely linked to the environment, and it can put a person in a relaxed or refreshed mood and can foster the promotion of healthy emotions. A study of the scenario employed in literature shows that green is relaxing because it is associated with growth and nature.

The power of green color in stimulating love is evident from the lines of the Sufi poet Rumi who wrote “Everyone talks about greenery, not with words, but quietly, as green itself talks from inside, as we begin to live our love”(Qtd in Barks Coleman “Green from Inside” *Rumi : The Big Red Book* 286). Colour Therapist Elizabeth Harper holds the view that “Green is useful for calming and balancing the heart, and is supposed to influence regeneration of cells and elimination of toxins”(Qtd in *The BioMat Book: Far-Infrared and Vibrational Medicine* 232)

Since it is capable of strengthening relationship and avoiding conflicts, Bharatha has rightly mentioned green as the color of erotic or sringara rasa. The romantic

relationship between the lover and the beloved is strengthened in the presence of green scenario and it can create more or less the same emotions in all Sahridayas. Even the deity Krishna associated with sringara rasa has a greenish blue color. The myth of gardens and meadows have played a dominant role in the erotic poems of ancient Greece and India.

Various physiological changes happen in the body at the sight of green color. The pituitary gland is stimulated and the muscles become relaxed, and the blood histamine levels increase, which leads to a decrease in allergy symptoms and dilated blood vessels, aiding in smoother muscle contractions. Green color is calming, stress-relieving, and invigorating. From time immemorial green color is associated with growth, spring, renewal and rebirth as it is an emotionally positive color. The ennobling influence of green color in stimulating passions might have prompted Bharathamuni to select green as the color of sringara rasa.

Yellow is widely acclaimed as the most luminous of all colors in the color spectrum. This color arrests the attention of the viewers more than any other color and this might have prompted Bharatha to accept yellow as the color of adbhutha rasa. As yellow is the most visible color of the spectrum the human eye is capable of processing yellow color first. The peripheral vision of yellow color is two times more than red. Yellow color also has a high reflection power. As yellow color increases blood pressure, accelerates pulse and breathing rate, it is most appropriate for adbhutha rasa. The anubhavas or bodily manifestation of feelings for adbhutha rasa follows this pattern. Adbhutha rasa is presented on the stage through nayanavistara (gaping of the eyes), karacaranaangulibhramana (movements of hand feet), Harsa (delight, bandhahahakara (shouts) etc follows this pattern of stimulation.

Marie-Louise Von Franz suggests that “Fairy tales are most generally human in their structure” and “in each type of tale you can study the most basic structure of human behavior”(13). Magic slippers, glass coffins, witches who live in the woods and princess with swan wings are the stories that are repeated again and again. The phrase “once upon a time “ is an invitation to the readers that they are entering a different world, a world where criteria of realism are irrelevant.(13) .The tales of heroism and adventure set up a literary play with the readers expectation of wonder. Eckstutt underlines the powerful impact of yellow color through the following words “Yellow’s luminescence has also dazzled emperors”(108). According to Eckstutt in Buddhist Tantra Literature yellow is the color used “to represent things on the rise; from wealth and health to knowledge and wisdom”(111).

The adbhuta rasa or the sentiment of wonder has *vismaya* as its *sthayibhava*. According to Bharatha adbhutha rasa is created through vibhavas such as *divyadarsana* that is seeing heavenly bodies, magical tricks, attainment of cherished desires etc. In all these celestial descriptions the gold tinged yellow color predominates. In ancient Indian religious texts and myths the saints have always highlighted the powerful effect of yellow color. Two of the most impressive things that Hindu saints found were - *Sandhya* (time of sunset/sunrise) and *Agni* (fire). Big chunk of Vedas are about extolling the virtues of the Sun and Fire and in all these phenomenon there is the predominance of yellow color. In the yagas and homas fire is depicted as a symbol of sacrifice and renunciation. The three predominant colors of sunset and agni are yellow, orange/saffron and red. These three colors are always employed in India to describe celestial beings and celestial occurrences.

Bharatha has attributed the color yellow as the color of *adbhuta rasa* or the marvellous sentiment. Magic spells and wondrous lamps mentioned in fairy tales and heroic tales always take on a golden yellowish tinge. In most Asiatic culture yellow is the color of glory and Bharatha has rightly used yellow as the color of *adbhutha rasa*. Yellow is the most visible color from a distance, so in literature it is often used for objects that appear from above and these include magical chariots and celestial damsels all clad in yellow.

Eva Heller has rightly remarked that the word for 'gold' in Latin is *aurum*, which means yellow. In ancient Greece, some gods were depicted with yellow hair, and men commonly bleached their hair or spent hours in the sun to turn it yellow(73). Yellow is the color of sun, light and optimism, which stimulates, activates and frees from fear. It retains the alertness and promotes concentration, symbolizes the creativity and wisdom. As Yellow is the most visible color, it is particularly attractive when employed in the costume of supernatural characters. Birren is of the view that yellow is the color of emotional and mental superiority and is preferred by persons of good mind and intelligence. It is preferred by persons of above average intelligence.(*Color &Human Response* 122). The fact that Bharatha was well aware of the power of yellow color in fostering superior emotions might have prompted him to assign yellow color to the marvellous sentiment or *adbhuta rasa*.

Red color is universally acclaimed as a passionate, vibrant and aggressive color. It is a very dominating color. It is capable of bringing about physiological and psychological changes. Faber Birren holds the view that extroverts and impulsive people

prefer red color and a person who prefers red color is “impulsive, possibly athletic, sexy, quick to speak his mind –right or wrong. A salient feature of the true red type is to be given to emotional ups and downs, to blame others or the world for any of his or her vexations”(*Color &Human Response* 120).As red color is capable of increasing blood circulation, breathing rates and metabolism it is the color of fight and war and this might have prompted Bharatha to allot red as the color of raudra rasa. Color therapist Faber Birren claims that exposure to red actually increases pulse rate and blood pressure (113).

Almost all the psychologists have accepted the vibrancy , power and strength of red color. Joann Eckstutt has emphasized the prominence of red color through the following words “the flashiest and sultriest of hues, red is a color that has fanned the flames of revolutions(35) Wexner's study on the impact of colors on human emotions dealt more generally with associations between colors and feelings. The color red was associated with "exciting" and "stimulating," both of which imply pleasure and high arousal (432). Blue was associated with "secure/comfortable" and "tender/soothing," which imply pleasure and low arousal. Orange was associated with "disturbing/distressed/upset," implying displeasure and high arousal. Black was associated with "powerful/strong/masterful," implying high dominance. (432.)

Floyd. L. Ruch holds the opinion that any strong emotion such as fear or rage is accompanied by a vast complex of internal changes involving muscular, chemical, glandular, and neural activities throughout the body, and this involves changes in facial expression and in overt behaviour. He is of the view that anger is caused by the excessive secretion of adrenalin in the blood, and travelling through blood it reaches the various

parts of the body, and is responsible for many physical characteristics of strong emotional experience:

Under its influence the liver releases stored sugar into the blood, and chemical changes occur which causes blood to clot more quickly. Blood pressure rise; the pulse beats more rapidly and more vigorously; the air passages into the lungs enlarge to admit more air. The pupils of the eye enlarge so that more light may enter. Sweat breaks out all over the body, particularly on the palm of the hands. The temperature of the skin may rise or fall several degrees.(151)

Floyd's description of the visible changes occurring in a person as a result of anger is akin to the anubhavas, and sattvika states mentioned by Bharata for krodha.

Dr. Mark Sircus holds the view that Red color can bring about physical aggression:

Aggression on the red level is physical. A person may come up to you and his only thought of aggression is to punch you in the nose. A bully is often like this. He wants to dominate you physically. The same need to dominate applies to men who want to grab a woman. The main point is that aggression on the Red level is a direct, physical, skin-to skin enterprise.(210-211)

. After conducting exhaustive experiments on the impact of red color on anger Dr.Mark Sircus has come out with following concept:

Anger has a lot to do with either the expression of power or the helplessness we experience when we are confronted with other peoples'

power and their abuse of it. Definitions of anger vary from being a body tension with a cognitive view of the world as being frustrating, irritating, insulting, unfair or assaulting to a literal demand from our internal being to act accordingly. The biological or evolutionary view of anger is one of preparing the entire organism for rapid response to threatening 217 situations. (Red Level) With anger the blood flows more quickly as heart rate increases and the rush of adrenaline generates the pulse necessary for vigorous action. (216-217)

The anubhavas mentioned by Bharatha for anger ,and the color red chosen by Bharatha for krodha rasa follows this definite physiological pattern.

Lakoff and associates have posited a conceptual metaphor theory of color and from this perspective, people talk and think about abstract concepts in concrete terms grounded in perceptual experience (i.e., they use metaphors) to help them understand and navigate their social world (198.) Thus, anger entails reddening of the face, so anger is metaphorically described as “seeing red,” These metaphoric associations are presumed to have implications for important outcomes such as morality judgments (e.g., white things are viewed as pure) and stereotyping (e.g., dark faces are viewed more negatively). The anubhavas mentioned by Bharatha for raudra rasa or the ferocious sentiment are red eyes, profuse perspiring, biting of lips, knotting of eyebrows, dilation of the eyes, blushing, and trembling. Dr.Marc Sircus holds the view that:

Red is the sex drive, the urge to procreate. Red is physical, pure action devoid of any forethought. The Red level person just jumps into the thick of things. And the time world or time sense of this level of awareness is

NOW! It is the level of our senses.... taste, sight, hearing, feeling through touch, and our sense of smell. The red level seeks stimulation through these senses and will often go to extremes in this regard, but in essence such a person experiences an incredible vitality through action.(208)

Jules B. Davidoff in his *Cognition through Color* reviews has conducted exhaustive researches on color cognition from the standpoint of modern neuropsychology. He regards color as one of the basic building blocks or modules from which perception is constructed and memories organized. In the 1990s,. Most of this research has focused on the causal connections between emotional states and exposure to colors. In summarizing their findings he writes:

Warm (the 'red' end of the spectrum) and cold (the 'blue' end of the spectrum) colors have been found to differentially alter both physiological and emotional states... Color is also believed to produce a direct effect on the endocrine system via the pituitary gland; its action is to increase aggressive behaviour under long-wave (red) light and reduce it under short-wave (blue/violet) light (61).

Bharatha has assigned Gaura (wheatish brown,pale orange) color for Vira rasa or the heroic sentiment. The color orange is suggestive of positive and benevolent aggression. But the effect created by orange color is different from the impact created by red color. Dr.Mark Sircar has described the traits of people attracted to orange color, “ Now other people may feel just as aggressive as the Red level fellow but they may not be prepared to biff you on the nose. So they project their aggression onto society by trying to

get to the top, like a politician. This requires a lot of pushiness” (221). According to Mark Sircar it is these people who are capable of making changes in society “Social change and political triumphs only spring from fearless action by those who ignore the negative doubters and are prepared to risk their reputations and even their lives.(221)

From ancient times orange color is associated to ‘symbolize nationhood, religious identity and athletic affiliations”(Ecstutt 72).To pinpoint their patriotism and national fervor ‘The fraternal Protestant Organization’ of Northern Ireland are named Orangemen. All the above mentioned observations validate beyond doubt the power of orange color in kindling positive and heroic ennobling sentiments. Howard Gardner is of the view that people who are attracted to orange color have great interpersonal intelligence .He defines Interpersonal intelligence:

as the ability to understand other people: What motivates them, how they work, how to work cooperatively with them. Successful salespeople, politicians, teachers, clinicians, and religious leaders are all likely to be individuals with high degrees of interpersonal intelligence. He says that the core of interpersonal intelligence included the "capacity to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people. In our day-to-day world of human existence no intelligence is more important than the interpersonal(Qtd in *The BioMat Book: Far-Infrared and Vibrational Medicine* 222)

According to Bharatha vira is the exhibition of energy and enthusiasm with persons of high rank as the basis. The Vibhavas or determinants are composure and

absence of infatuation,. The vyabhichari bhavas or transitory States associated with vira rasa are fortitude, intellect, pride, impetuosity, -ferocity, indignation, recollection etc., Its presentation on the stage is through the Anubhavas or consequents such as heroism, bravery, readiness to sacrifice, perseverance, good tactics ,valour, power, aggressiveness, mighty influence and other similar features. What is called Vira Rasa is produced through enthusiasm, perseverance, absence of grief, absence of surprise and freedom from delusion. The Vira Rasa should be depicted perfectly on the stage through statements scolding and censuring (the wrong doers), display of bravery, vigor, heroism, enthusiasms, aggressiveness and heroic exploits. The important character traits of persons attracted to orange color as given by Mark Sircar clearly echoes the vyabhichari bhavas of Vira rasa mentioned by Bharatha.

Issac Newton after conducting exhaustive researches on light deduced that white color contains all the colors in the rainbow. According to Newton it is not a separate color but the result of all the colors reflecting at once , “In a very dark chamber, at a round hole, about one-third part of an inch broad, made in the shut of a window, I placed a glass prism, whereby the beam of sun’s light, which came in that hole, might be refracted upwards toward the opposite wall of the chamber, and there form a colored image of the sun “ (Qtd in *The Secret Language of Color* 12) White color is generally regarded as the symbol of purity and perfection. It is suggestive of innocence and mental equanimity. It is suggestive of neutrality, fairness , impartiality and self independence. Bharatha has assigned white as the color of hasya or the humorous sentiment.

Bharathamuni has mentioned only eight sentiments but the later Indian aestheticians have added one more sentiment shantha or Quietitude and they have

assigned white as the color of shantha rasa. Maybe the fact that the total surrender of all emotions may result in mental equanimity might have prompted the selection of white as the color of shantha rasa .

(Kapota) Gray, Dove color is allotted to karuna rasa or pathetic sentiment by Bharatha. Gray is a neutral color and a person's preference to a neutral color is an indication of mental distress. Gray is a dull and insignificant color. The gray color creates sadness and depression and a tendency to loneliness and isolation .Faber Birren is of the view that "rejection, skepticism or outright denial of emotional content in color probably indicates a disturbed, frustrated or unhappy mortal"(119). Birren is of the view that gray color is generally preferred by disturbed mortals. The vihavas,anubhavas and vyabhichari bhavas mentioned by Bharatha for karuna rasa is absent from all vibrant color effect. Grey color indicates lack of confidence, dampness, depression, hibernation, lack of energy. In nature grey is the only color that has no direct psychological properties but it has suppressive qualities. A virtual absence of color is depressing and has a saddening effect on the emotions.

Pathos, Soka or sorrow is the Sthayi Bhava of the Karuna Rasa. The Vibhavas or determinants are curse, distress, down fall, calamity, separation from the near and dear, loss of wealth, murder, imprisonment, flight, dangerous accidents and misfortunes. . The Karuna Rasa takes its origin through different bhavas either at the sight of the death or murder of the dear one or when unpleasant words have an adverse impact. The Vyabhicari Bhavas of Karuna rasa are dejectedness, indifference, languor, anxiety, yearning, excited state, illusion, loss of sense, sadness, ailments, lethargy, sluggishness, epileptic loss of memory, fear, death, paralysis, tremour, pallor in the face, shedding of

tears, loss of speech and the kindred feelings. Its presentation in the stage is through the Anubhavas, like shedding of tears, lamentation, parched throat and mouth, pallor of the face, drooping of the limbs, gasping for breath, loss of memory and other similar things.

The psychologist Shafer has recorded the experience of some four thousand air men, who flew dangerous planes in hazardous conditions and almost all of them have experienced more or less the same bodily changes like the “pounding of the heart, tenseness of the muscles, dryness of the mouth, cold sweat, need to urinate, and sickness in the stomach” (qtd in Hilgard *Introduction to Psychology* 252). The anubhavas mentioned by Bharata for bhayaanaka rasa, like paralysis, agitation in the limbs, parched lips and throat, dryness of the mouth, stunned sensation in the thighs, and palpitation are akin to the bodily responses of fear mentioned by Shafer.

Charles. F. Levinthal, who has conducted exhaustive researches on the fear pattern of individuals has perceived an almost uniform bodily response for the emotion of fear. All the bodily responses to this emotion are activated by the increase in blood pressure, fluctuation in the rate of heart beat, and an increase in muscle potential level. He arrived at the conclusion that this fear pattern was influenced by the physiological effects of epinephrine secreted by the adrenal medulla.(351) are related to physiological arousal plus cognition about the causes of arousal that result from environmental causes and this purpose is served by the vibhavas. The psychologists are of the opinion that even in the first hours of life one can see a fixed pattern in the stimuli of each basic emotion. The stimuli mentioned by them for the basic emotion of fear have close affinity to the uddipana vibhavas of bhayanaka rasa mentioned by Bharatha. Psychologists like Clifford. T. Morgan and Richard. A. King are of the view that “sudden stimulations of high

intensity like vision, sound or touch, and isolation can cause an acceleration in the activity of the basic emotion of fear.” (*Introduction to Psychology* 252)

Black is accepted as the color of despair, fear and death It is associated with negative connotations. It is a color associated with evil. It is a color employed in performing arts to distinguish the villains. It is associated with negative and adverse situations. Bharatha was well aware of the psychological and physiological aspects of black color and this might have prompted him to make black the color of bhayanaka rasa. Bhayanaka rasa has its origin in the dominant state of fear.. According to Birren black is the color of mental trouble and disturbance . Black is all colors, totally absorbed. The psychological implications of that are considerable. It creates protective barriers, as it absorbs all the energy coming towards a person , and it enshrouds the total personality of the person. Black is essentially an absence of light, since no wavelengths are reflected and it can, therefore be menacing; many people are afraid of the dark. (126). . Black is the color of mourning, and over the centuries it was frequently associated with death, evil, witches and magic. According to surveys in Europe and North America, it is the color most commonly associated with mourning, the end, secrets, magic, force, violence, evil, and elegance. It is the color of witchcraft sorcery and black magic. (Eva Heller 115)

The Sthayi Bhava of Bhayanaka rasa is Bhaya or fright. Bharatha holds the view that the outcome of Bhayanaka rasa is through the Vibhavas or determinants such as Vikrta Rava or terrific noise, Uarsana Sight of apparitions, Sivoluka Trasodvega or the panic and worried state on hearing the cries of jackals and owls, Sunyagara or the Empty house, Aranya Pravesa or entering a forest, Marana or deaths Svajanavadha or the murder of kings men, Bandhana or Imprisonment., The presentation of Bhayanaka rasa on the

stage is through the Anubhavas such as Pravepitakaracarana (trembling of the hands and feet), Nayanachalana (movements of the eyes), Pulaka (hairs standing on ends), Mukha Vaivarnya (Pallor in the face), Svarabheda (change of voice and tone) and the likes. The Vyabhichari bhavas are Stambha (Paralysis), Sveda (Perspiration), Gadgada (Choked Voice). Romanca (horrification), Vepathu (trembling), Svarabheda (change of voice or tone), Vaivarnya (lack of luster), Sanka (suspicion), Moha (fainting), Dainya (dejection), Avega (Agitation), Capala (restlessness), Trasha (fright), Apasmara (epilepsy or loss of memory), Marana (death) etc. (81)

Goethe the German poet had a definite rationale about the aesthetic and emotional influences of colors and according to him a good artist will definitely have an excellent knowledge of colors.. Goethe regarded blue, violet and purple as minus colors..He regarded blue as a repulsive color.. “This colour has a peculiar and almost indescribable effect on the eye .As a hue it is powerful, but it is on the negative side, and in its highest purity,as it were, a stimulating negation..It’s appearance then is a contradiction between excitement and repose”(310). From the color of the sky to the color of the blue oceans blue is regarded as an enigmatic color. It has contradictory qualities This varying power of the blue colour is summed up by Eckstut in the observation given below “...it is calming and cooling. On the other hand, we all get the blues at one time or another, and blue can be the moody underside to our otherwise rosy dispositions. For centuries, blue has remained unique in its polarities”(184).

Experiments conducted by Cajochen and others have proved that blue light is expected to facilitate alertness and enhance performance on tasks requiring sustained attention. Blue light, in particular, is posited to activate the melanopsin photoreceptor

system which, in turn, activates the brain structures involved in sub-cortical arousal and higher-order attentional processing (“High sensitivity of human melatonin, alertness, thermoregulation, and heart rate to short wavelength light”). Mark Sircus was very much preoccupied with the negative impacts of blue color.”Negative blue types tend to be judgmental, rigid, ultra-conservative and afraid of change, slow to get in touch with feelings, fearful of conflict (rocking the boat or peace at any price attitudes), and blue types often feel "blue" or depressed”(243).“The Blue person is generally inner-centric and quite uncomfortable when faced with new, novel and strange facts that have not been accepted by existing authority nor incorporated in the modern dictionary”.(245). Birren regards blue persons as politically reactionary and in cases even ultra reactionary, they are rational human beings, they are self righteous persons. (124).

Bharatha was well aware of the power of colors in body painting and in costumes. According to Bharatha“the painted body with the change of costume should be considered the result of Natyadharma(conventional practice) affecting the characters”(315). Since the demonic characters create fear and disgust he has allotted dark blue color for such characters “The Daityas, the Danavas, the Rakshasas, the Guhyakas, the Pisacas, deities of mountains, water and sky are dark blue in colour”(316). Bharatha has rightly allotted blue as the color of Bibhathsa rasa or the odious sentiment because of its extreme polarity.

In chapter twenty fifth of *The Natyasastra* titled Aharabinaya-Costumes and makeup Bharatha has given a detailed account of the color schemes involved in the costumes and appearance of characters. In the painting of the limbs Bharatha insisted on the use of four natural colors white, blue, yellow and red. Other than these basic colors

Bharatha mentions some other colors produced by the mixture of these colors. These colors called upavarnas or derivative secondary colors and their combination is mentioned by Bharatha in a detailed manner in this chapter. The four primary sentiments mentioned by Bharata are also based on a psychological pattern. “The four natural colors are white, blue, yellow and red. Angavartana (painting of the limbs should be carried through these colors. There are other colors produced by the mixture of these colors. There are also upavarnas (derivative secondary)”(315).

Bharatha was well aware of the primary colors and secondary colors and how their proper mixing can create the right mood. In his *Natyasastra* Bharata has given a detailed study of the mixing of different colors. The primary colors are colors that cannot be created through mixing .They are pure or original colors. The primary colors acclaimed are red, yellow and blue. Bharatha gives a detailed account of the mixing of the colors .By mixing white with yellow color the pandu or yellowish white color is produced. The white and blue color when mixed together produces karandava or duck color.The blue and red color when mixed together yields the kashatya or dark red color. When white is mixed with red the padma or lotus color is produced. By mixing yellow with blue the harita or green color is produced(315).He has given detailed instructions of the different colour costumes used by different category of characters.”The painted body together with the change of costume should be considered as the result of Natyadharma(conventional practice affecting the characters)”(315) .

Chapter - 5

Conclusion

Ancient India had a very rich cultural heritage and ancestry and it is the moral obligation of this nation, to share its cultural heritage with others. The importance of this interdependence of cultures and traditions is manifested in the words of S.Radhakrishnan “Our system of thought must act and react on world progress. Stagnant systems like pools, breed obnoxious growths, while flowing rivers constantly review their waters from fresh springs of inspiration”(19).The theory of rasa put forward by Bharathamuni still exists, as the best intellectual treatise for the defense of the theory of emotions in art and literature and all the modern developments in the fields of psychology and physiology underline the value of this theory. Bharatha has presented his views with profound clarity and vigour. The greatest merit of this theory is it’s flexibility, it is an open text, it does not impose an ultimatum, it leaves it open to readers to comprehend the infinite possibilities offered by this text and to come out with newer and newer interpretations.

The greatest charm of the rasa theory is not so much its originality but its probing for new interpretations of it to arrive at a coherent critical approach and in the modern critical scenario fraught with torrid tussles over theories it is impossible to write of this ancient rasa theory as invalid. It can rightly be said that the well established and crystallized school of rasa has now expanded its horizon beyond its precincts and can offer a sound explanation and rational to all the changes taking place in the field of aesthetic appreciation and this has made the theory of rasa nulli secundus in evaluating

and interpreting almost all literary works that deal with the language of human emotions..

The universal validity of the aesthetic theory of rasa is evident from the following remark of S.S.Barlingay “As all processes of creation whether they belong to dance, drama or poetry, music or painting are concerned with the transition from something mental to something objective. The name rasa which Bharatha gives to this process of objectifying is therefore equally true of all arts like poetry, whether they are manifestly seen or not” (312-313). There are critics, who regard the rasa theory as an antediluvian prejudice of the past and they condemn it for its non-empirical nature. But the developments in the fields of psychology and physiology have established beyond doubt the supremacy of this theory as grounded on solid facts. Bharatha has analyzed with clinical precision the entire range of human emotions right from the basic to the transient, and his notion of the sthaya bhavas is the same as the theory of the basic instincts of man put forward by the modern psychologists. Through his *Natyasastra* Bharatha has touched the entire gamut of human emotions, right from the basic emotions to the transient ones. .

Color emotion can rightly be defined, as the relationships between color and the sahrdaya's/ viewer's psychological response. A more complex definition is perhaps the relationship between color stimuli and psychological responses in terms of both linguistic associations and emotional content, considering the configurations and the context in a visual experience .Colors have certain wavelengths, which can be felt and experienced and they can influence the emotions. Colors and emotions are both composed of real physical vibrations. Colors and emotions constantly affect people in their everyday life.

For example, the colors that a person wears influence him, his moods and also the temperament of the people around him..

Neuropsychology which concentrates on the relationship between brain and human behaviour has highlighted the importance of colors in bringing about psychological and physiological changes due to sensation and “sensation is the product of environmental stimulation prior to its perceptual interpretation”(Coren, Ward & Enns 330). Exhaustive researches conducted by Chan Jean Lee and associates have made them arrive at the following conclusion, “experimental results with simple colors suggest that signaling the same attitudinal tone is enough to change people’s liking for aesthetic stimuli when they are experiencing an emotion to which they are committed”(32). Eduardo Andrade regards colors as “ powerful signals, in part, because of their readily accessible emotional tones” (355).

Chromotherapy has emerged as an important branch of study in recent years. Chromotherapy is now relabelled as photobiology or color therapy . Many scientists are of the view that light and color have a far greater impact on human emotions, health and behaviour and they can influence human behaviour in a substantial manner .According to Birren, colors have many emotional impacts, namely, temperature, strong and weak, hard and soft, and active and calm. As far as hardness and softness are concerned brightness and low saturation create a soft feeling, whereas dimness and high saturation create a hard feeling. Also, weaker contrast and saturation convey calmness as opposed to stronger contrast and saturation, which convey activeness. Warm colors are those that are vivid in nature. He also asserted that warm colors, such as red and yellow, increase

emotional arousal more than cool colors, such as green and blue. More time spent in enclosed areas under artificially colored lights, can induce negative feelings. (15).

Ivan Magrin, who has conducted exhaustive researches on the impact of colors in performing arts has asserted the importance of colors in performing arts through the following statement:

The selection of color is very important in performing arts. The colors are capable of creating the feeling or tone of a performance. “The ambience or scenario is created through a combination of techniques, stagecraft, language and dramatic elements working in harmony with each other. Every element that is part of the design of a stage or a set (furniture, costumes, props, make-up, carpets, wallpaper, wall paints, etc.) impacts the overall color perception. The proper mood in dramatic representation and visual arts can be created through lighting, setting, colour, contrast etc. (“*The Use of Color in Theatre and Film*”)

The importance of colors in art and literature is also evident from the following remark made by Tolstoy, “to evoke in oneself a feeling one has experienced and having evoked it in oneself then by means of movements, lines, colors, sounds or forms expressed through words, so to transmit that feeling that others experience the same feelings-this is the activity of art”(Qtd in Melvin Rader 48). Colors play a vital role in transferring a person’s emotions to others. Faber Birren has firmly emphasized the human brain’s response to color through the following words “The aura, skin response,

brain response-and also heart beat, respiration, blood pressure-seemed to be involved with color through electrical impulses”(81).

Rasa is based upon a particular view of psychology which holds that human personality is constituted, both towards its motivation and intellection, of a few primary emotions which lie deep in the subconscious or unconscious strata of human being. These primary emotions are the amorous, the ludicrous, the pathetic, the heroic the passionate, the fearful, the nauseating, the wondrous. Other aesthetic psychologists have in later times added to it the peaceful or intellectual, the devotional and filial. These emotions are running through all nature in a permanent manner and may in that sense be called dominant emotions (sthayibhavas). These dominant states that determine the particular internal temperaments are regarded as the dominant characteristics of those emotional states. It should, however, be noted that no emotion is called Rasa unless it is aesthetically excited.

In all arts, especially in the case of performing arts moods, feelings and emotions play a dominant role in creating aesthetic relish and since colors play a dominant role in stimulating the emotions the importance of colors in performing arts can never be overlooked. Performing arts are dynamic and not static like plastic arts and so they are suggestive of various emotions and feelings, and colors play a vital role in performing arts in inducing the right moods and right emotions..There is a close interconnectedness between the scientific concepts about colors and Bharatha's treatment of colors and this study has proven the point that there need not be any contradiction between art and science. This point is highlighted by Melvin Rader in the article "Art in the Age of

Science and Technology, “Science and art need not be in conflict. Different though they are, they inhabit the same world, draw upon similar creative talents, and contribute to imaginative enjoyment and cognitive insight (490) .

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