

*CIIL Occasional Monographs Series - 40*

# SILENT TALK

NONVERBAL COMMUNICATION

M. S. THIRUMALAI



CENTRAL INSTITUTE OF INDIAN LANGUAGES  
MANASAGANGOTRI, MYSORE 570 006



CENTRAL INSTITUTE OF INDIAN LANGUAGES  
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40

*General Editor*  
D. P. PATTANAYAK

*Production*  
H. L. N. BHARATI



**Dedicated with Gratitude and Admiration**

**To My Teacher**

**Professor Stanley Starosta**

**Department of Linguistics**

**University of Hawaii**



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# **SILENT TALK**

## **NONVERBAL COMMUNICATION**

**M. S. THIRUMALAI**



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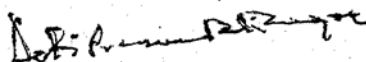


## FOREWORD

The Central Institute of Indian Languages was set up on the 17th July, 1969 with a view to assisting and coordinating the development of Indian languages. The Institute was charged with the responsibility of serving as a nucleus to bring together all the research and literary output from the various linguistic streams to a commonhead and narrowing the gap between basic research and developmental research in the fields of languages and linguistics in India.

The Institute and its six Regional Language Centres are thus engaged in research and teaching which leads to the publication of a wide ranging variety of materials. Materials designed for teaching/learning at different levels and suited to specific needs is one of the major areas of interest in its series of publications. Basic research relating to the acquisition of language and study of language in its manifold psycho-social relations constitutes another broad range of its interest. This book, **Silent Talk : Nonverbal Communication**, by Dr.M. S. Thirumalai, Professor-cum-Deputy Director, CIIL, discusses the aspects of nonverbal communication and links the same with social and psychological factors as well as verbal communication. The study of nonverbal communication always formed part of Indian traditional grammars. Grammar, then, was seen as a study of the comprehensive phenomenon involving both verbal and nonverbal elements. Modern linguistics courses, however, have not adequately focussed upon aspects of nonverbal communication and the inter-relationship between verbal and nonverbal communication processes. Study of nonverbal communication will be found highly useful for culture analysis and description, sociological analysis, for language

teaching and learning, for therapy purposes and for literary analysis, among others. I do hope and wish that, with the publication of this book, the students of linguistics and related disciplines will show a greater interest in the study of aspects of nonverbal communication.



(D. P. PATTANAYAK)  
Director

## PREFACE

This book, **Silent Talk : Nonverbal Communication**, is intended for the benefit of students of linguistics and adjacent sciences, such as psychology, sociology, anthropology and speech pathology, who would like to know something more about the aspects of nonverbal communication than provided in their respective courses. Throughout the book, I have made attempts to relate these aspects to Indian contexts. The book is divided into six chapters, focusing on definition and scope of nonverbal communication, proxemics and nonverbal communication, use and function of eye and face in nonverbal communication, use and function of language and silence in nonverbal communication, gesture, and the use and function of nonverbal communication in the abnormal individuals.

Parts of this book have been presented in lectures which I delivered at the Department of Linguistics, Madurai Kamaraj University, Department of Linguistics and Department of Tamil, Bharathiar University, and the Department of Tamil, University of Madras. I am grateful to all those who attended these lectures and who, by their insightful questions, helped me revise the earlier drafts. In particular, I must express my gratitude to Dr. M. Israel, Professor and Head, Department of Linguistics, Madurai Kamaraj; Dr. K. Karunakaran, Professor and Head, Department of Linguistics and Dean, Faculty of Arts, Bharathiar University, Dr. N. Jeyaraman, Professor and Head, Department of Tamil, Bharathiar University, and Dr. N. Sanjeevi, Professor and Head, Department of Tamil, University of Madras. Their gesture, at a time when I badly needed personal reassurance and academic encouragement,



helped me to complete this book soon.

I had many useful discussions with my colleagues – B. Mallikarjun, Sam Mohanlal, N. Nadaraja Pillai, Vimala Nadaraja Pillai, B. Syamalakumari, Sambamurthi and H.L.N. Bharati on the design, content, scope, and coverage of this book. They were kind to read the manuscript in several stages of its completion and offered critical comments which helped me to improve the quality of the contents and their presentation in this book.

Mrs. C. R. Sulochana, Miss Suman Kumari, Mrs. Sharada Mallikarjun, the Librarians of the CIIL Library, and the Library Staff Sri Nissar Hussain and Sri Anwar Pasha helped me in locating and obtaining necessary reference materials. Dr. D. P. Pattanayak, Director, CIIL, Sri H. L. N, Bharati, Assistant Editor, Sri V. Gopal, Stenographer (Technical), who set the type for the entire book, Sri Sambamurthi, who typed the numerous drafts of the manuscript, Sri S. B. Biswas, Manager, CIIL Printing Press and my other colleagues at the CIIL Printing Press deserve special mention. I am grateful to all of them.

My wife Swarna read the entire manuscript and helped me write and rewrite several times. But for her personal care and understanding I would never have completed writing this book.

With gratitude and admiration, I dedicate this book to my teacher Professor Stanley Starosta, Department of Linguistics, University of Hawaii, an insightful theoretician and a delightful teacher of Linguistics, whose insistence on the deeper analysis of linguistic structures is matched equally by his awareness of the need for supplementing this analysis with findings from other sciences as well.

M. S. Thirumalai

## CHAPTER 1

### NONVERBAL BEHAVIOUR

#### 1.1. What is Nonverbal Behaviour?

What is nonverbal behaviour and what does study of nonverbal behaviour include? Nonverbal behaviour refers to communicative human acts distinct from speech. Since nonverbal behaviour includes every communicative human act other than speech (spoken or written), it naturally covers a wide variety and range of phenomena: 'everything from facial expression and gesture to fashion and status symbol, from dance and drama to music and mime, from flow of affect to flow of traffic, from the territoriality of animals to the protocol of diplomats, from extra-sensory perception to analog computers, from the rhetoric of violence to the rhetoric of topless dancers' (Harrison, 1973).

The nonverbal behaviour is taken generally to include facial and eye expressions, hand and arm gestures, postures, positions, use of space between individuals and objects, and various movements of the body, legs and feet. Since nonverbal behaviour is considered as distinct from speech, it also includes silence as well as dropping of elements from speech and/or the missing elements in speech utterances. There is a general consensus that, although non-verbal behaviour means acts other than speech,

in a broader sense nonverbal behaviour includes also a variety of subtle aspects of speech variously called paralinguistic or vocal phenomena. These phenomena include fundamental frequency range, intensity range, speech errors, pauses, speech rate and speech duration. These features are of a nature that somewhat eludes explicit description when used in communicative contexts. In other words, these features are employed for implied meanings and are not explicitly describable and/or stated through/as linguistic units. Also included in discussions of nonverbal behaviour are other complex communication phenomena, such as sarcasm, 'where inconsistent combinations of verbal and nonverbal behaviour take on special significance in subtly conveying feelings' (Mehrabian, 1972).

Thus, even though as a working definition nonverbal behaviour is conceived to be everything other than speech, the boundary between verbal and nonverbal is always blurred and there are certain aspects of speech which fall within the domains of nonverbal behaviour. In view of this, it is not surprising to find that the researchers have differed among themselves as regards the definition and scope of the study of nonverbal behaviour.

For Argyle (1969), nonverbal behaviour includes bodily contact, posture, physical appearance, facial and gestural movement, direction of gaze and the paralinguistic variables of emotional tone, timing and accent. Duncan (1969) includes body movement or kinesic behaviour, paralanguage, proxemics, olfaction, skin sensitivity to temperature and touch, and the use of artifacts. For Schefflen (1968), the nonverbal behaviour includes kinesic, postural, tactile, odorific, territorial, proxemic and artifactual categories, in addition to nonlexical vocal modalities of paralinguistic behaviours.

Knapp (1972) includes body motion, or kinesic behaviour, facial expression, physical characteristics, eye behaviour, touching behaviour, paralanguage, proxemics, artifacts and environmental factors. Poyotos (1977) proposes a classification of nonverbal phenomena based on sensory channels, possible combinations of verbal and nonverbal and on the interactional potential or otherwise of the behaviour. Thus, the sensory channels involved are acoustic, visual, olfactory and tactile. The classes identified are verbal-vocal, nonverbal-vocal, and nonverbal-nonvocal. Some acts are interactional and some are not interactional. Harrison (1973) covers the nonverbal behaviour domain under four codes: performance codes based on bodily actions, artifactual codes (the use of clothing, jewellery, etc.), mediational codes involving manipulation of the media, and contextual codes such as employment of nonverbal signs in time and space. Harper *et al* (1978) limit their consideration of nonverbal phenomena to those that are most important in the structuring and occurrence of interpersonal communication and the movement to movement regulation of the interaction. The nonverbal phenomena include, for them, consideration of spatial (proxemic) aspects of the physical setting of interaction, but not dress, use of artifacts and physical characteristics, as constituting nonverbal behaviour. Note that all these definitions generally centre around body area and body activities. Several of these also cover the use of artifacts. Most of the definitions cover the use of paralanguage and manipulation of certain aspects of speech under nonverbal behaviour.

In this book nonverbal behaviour is studied from the following angles: (i) Proxemic, (ii) Postural, (iii) Facial, (iv) Movement, (v) Paralanguage, (vi) Eye, (vii) Silence, (viii) Perceptual features (artifacts) and (ix) Gesture. These features are covered under



several chapters. Chapter-1, apart from presenting the scope and definition of nonverbal behaviour, discusses the relationship between verbal and nonverbal communication and various approaches to the study of nonverbal communication. Chapter-2 presents proxemic behaviour; Chapter-3 presents nonverbal communication as expressed through eye and face; Chapter-4 discusses nonverbal behavioural aspects of language use and silence; Chapter-5 discusses gesture; and Chapter-6 presents salient features of nonverbal communication in abnormal individuals.

## **1.2. Relationship Between Verbal and Nonverbal Communication**

There are several ways in which the nonverbal behaviour is seen clearly related to verbal behaviour. This relationship is one of dependence and also of independence. There are nonverbal communicative acts that are easily and accurately translated into words. Several gestures clearly illustrate this relationship. For example, the gesture of folded hands for *namaste*, the gesture of handshake, a smile, a frown, etc., are generally translatable into words. There is also a class of nonverbal acts that are very much a part of speech and serves the function of emphasis. Examples are head and hand movements that occur more frequently with words, and phrases of emphasis. There are acts which draw pictures of the referents tracing the contour of an object or person referred to verbally. Yet another class of acts is employed for displaying the affects (feelings). Another class refers to acts that help to initiate and terminate the speech of participants in a social situation. These regulators might suggest to a speaker that he keep talking, that he clarify, or that he hurry up and finish (Ekman and Friesen, 1969).

There are at least six ways in which the relationship between verbal and nonverbal communication can be characterized. These are as follows:

(1) The relationship between verbal and nonverbal communication is one of the latter playing a supplementary role to the former. The nonverbal acts that are supplementary to verbal acts may precede or follow or be simultaneous with the verbal acts. For example, in many verbal acts one notices an accompaniment of one or more nonverbal acts, such as gestures, facial expressions, and movement towards or away from the addressee, to illumine the meaning of the former. While for any verbal acts such an accompaniment may only be considered redundant, for several others, such an accompaniment does, indeed, illumine the meaning of the former, adds explicitness, clarity, emphasis, discrimination and reinforcement.

(2) The relationship between verbal and nonverbal communication is also one of the former playing a supplementary role to the latter. In many verbal acts, both in children and adults, in normals with all the linguistic organs intact, and normals with some handicap to the linguistic organs, as well as in abnormal individuals, nonverbal acts may take precedence over the verbal acts in several ways. In the normals with all the linguistic organs intact, occasions demand the use of nonverbal acts such as pantomime and gestures for aesthetic purposes, and for purposes of coded (secret) communication. Indulgence in nonverbal acts as primary medium is also necessitated by the distance that separates the parties which can, however, retain visual contact while engaging themselves in communication.

(3) The relationship between verbal and nonverbal communication could be one of correspondence as well. That is, there are several nonverbal acts that can be accurately translated into words in the language of a culture in which such nonverbal acts are performed.

## [6] Nonverbal Behaviour

A handshake, shaking a fist at someone, a smile, a frown, etc., are all nonverbal acts translatable into verbal medium in a particular language. The functions of these nonverbal acts, context to context, are also translatable. Furthermore, such correspondences are also codified in aesthetic non-verbal acts, such as dance, sculpture and other arts. The correspondence is sometimes translatable into words, sometimes into phrases and sentences, and several times translatable into compressed episodes involving lengthy language discourses. But the correspondence is there all the same and the import of this correspondence is shared between individuals within a community. There is also yet another correspondence of nonverbal acts in the sense that similar nonverbal acts could mean different things in different cultures.

(4) Yet another relationship between a verbal act and a nonverbal act is one of dependence. A verbal act may depend for its correct interpretation entirely on a nonverbal act. Likewise a nonverbal act may depend for its correct interpretation entirely on a verbal act. In extreme circumstances, the former is caused because of deliberate distortion of the verbal act, or because of the difficulty in listening clearly to the verbal act, or because of the difficulty in reading with clarity what is intended to be read in the written verbal message. Deliberate distortion is not found only in contrived acts such as poetry or drama. It is done in day to day language itself. Distortion and opacity of the verbal message are also required in certain socio-cultural contexts wherein it is demanded that verbal acts be suppressed and made dependent on nonverbal acts. The dominant nonverbal act also depends on verbal acts for clarity. This dependence, like the former, could be contrived. It also occurs in daily life.

(5) Verbal and nonverbal acts can be independent of one another. Something is communicated through a verbal act. The continued manifestation of this communicative act may be in the form of nonverbal acts. That is, in a

single communicative act, part of the message may be in verbal form and the rest in nonverbal, in an alternating way. Each part is independent of the other. This is contrived in poetry and drama. It is also found in every day life. An extreme form of this independence is the gulf that we notice between what one says and what one does. Also prevarication both in word and deed derives its strength, among others, from this feature.

(6) Another relationship between verbal and nonverbal acts is one of non-relevance. This is most commonly found in normal adult speech and its accompanying gestures which are produced simply without any communicative intent. We move our hands, snap our fingers, move our bodies while speaking, with these gestures having no relevance to the speech we make. When this non-relevance between verbal and nonverbal acts found in normals is shifted to non-relevance or irrelevance within the single domain, within speech itself or within nonverbal act itself (during which coherence in speech or act is lost), we start considering the individual abnormal in some way. That is, non-relevance across the verbal and nonverbal media is normal, but non-relevance within a single medium is abnormal. The non-relevance is idiosyncratic and could be imitational as well. In the normals the excessive non-relevance of nonverbal acts accompanying speech comes to hamper the understanding of the verbal acts.

Harrison (1973) has suggested the following functions for nonverbal communication:

(1) Nonverbal signs define, condition, and constrain the system; for example, time, place and arrangement may provide cues for the participants as to who is in the system, what the pattern of interaction will be, and what is appropriate and inappropriate communication content.

(2) Nonverbal signs help regulate the system, cueing hierarchy and priority among communicators, signalling the flow of interaction, providing meta-communication and feedback.



## [8] Nonverbal Behaviour

(3) Nonverbal signs communicate content, sometimes more efficiently than linguistic signs but usually in complementary redundancy to the verbal flow.

Ekman and Friesen (1969) specify five general functions for nonverbal behaviour, namely, repetition, contradiction, complementation, accent and regulation. In repetition there is both verbal and nonverbal expression made simultaneously, where one will do. In contradiction, the verbal and nonverbal behaviours contradict one another as in the case of a verbal praise in a sarcastic tone. In accent, spoken words are emphasized through nonverbal acts. Through the use of eye contact, gestures and others, nonverbal behaviour is employed to regulate human interaction and communication.

Based on the above brief discussion, we find that the relationship between verbal and nonverbal behaviours can be considered as follows:

(1) The relationship between verbal and nonverbal communication is one of the latter playing a supplementary role to the former.

(2) The relationship between verbal and nonverbal communication could be one of the former playing a supplementary role to the latter.

(3) The relationship between verbal and nonverbal communication could be one of correspondence.

(4) The relationship between verbal and nonverbal communication could be one of mutual dependence.

(5) The relationship between the two could also be one of independence from one another.

(6) The relationship between the two could be one of non-relevance as well.

(7) The relationship between verbal and nonverbal communication could be one of one repeating the message of the other.

(8) The relationship between verbal and nonverbal communication could be one act contradicting the other.

(9) The relationship between verbal and nonverbal communication could also be one of mutual emphasis.

(10) Finally, the relationship between the two could also be one of mutual regulation.

While the study of verbal behaviour and non-verbal behaviour has been done independently in several disciplines, the relationship between the two has not received the attention it deserves. Human communication is a wholesome fusion of both verbal and nonverbal acts. This fusion appears to have both physiological (genetic) as well as socio-cultural consequences. The fusion of verbal and nonverbal behaviours in a communicative act marks the human species distinct from other species. That is, the manner in which the fusion between verbal and nonverbal acts has taken place in humans marks the humans distinct from other species. Also, societies and cultures are distinguished from one another by the style and exploitation of this fusion of verbal and non-verbal acts for varying contexts, pursuits and purposes. Moreover, various cognitive disorders, including language disorders, found in humans can be seen as those of differences in the degree and manner of fusing the verbal and nonverbal behaviours.

That the verbal and nonverbal behaviours are closely related is well recognized by all. Socialization processes in every society insist upon mastery and exploitation of this relationship in both children and adults in their communication

modes. For example, what postures, voice modulations, facial expressions, gestures, etc., that one should or should not employ in a particular context for a particular pursuit and purpose are all pre-determined in cultures. Deviations from the well-set norm are allowed for certain effects only. Deviations are also classified into several abnormal varieties. In essence, what makes communication essentially human is the intrinsic binding within all such communication between verbal and non-verbal facets.

This binding between verbal and nonverbal behaviour is the result of their phylogeny. Some have claimed that the same deep cognitive system is used in language and nonlinguistic behaviour. Some have claimed that nonverbal behaviour is a developmentally earlier and more primitive form of communication which man shares with animals (Werner, 1957). Reusch (1955) distinguishes between analogically and digitally coded information. The analogically coded information contains the immediate state of feeling of the individual. There is a continuous relationship between the events and the interacting individuals. The digitally coded information is verbally or numerically coded information which employs discrete units such as words and numbers. The digitally coded information is much more divorced from the interacting individuals than the analogically coded information.

These, unlike the analogically coded information, pertain to matter which may or may not be temporally or spatially tied to the prevailing interaction. Also, the information could be present in propositional form. Reusch suggests that actions, practical or expressive, convey their messages analogically whereas words and discrete symbols convey their messages digitally. According to Reusch, the analogic codification occurred first in the develop-

ment of communication. Also, analogic codification is viewed as related phylogenetically than digital codification to all communication. While the latter (digital codification) is more amenable for conscious control, the former is not and this is also taken to indicate the precedence of analogic codification over digital codification.

Nonverbal behaviours reflect very basic social orientations that are correlates of major categories in the cognition of social environments (Piaget, 1960). In other words, the nonverbal behaviours pursued in a society reveal the orientations towards interactions between persons that individual members of that society consider as basic. There are also common cognitive and behavioural dimensions for both animal and human social systems. Hence, some have claimed that primates, in particular, can provide complementary information, about certain aspects of affect and attitude communication in humans (Sommer, 1967). That is, the observation of animal social interactions can complement the study of individuals of a single culture and provide corroboration for identified dimensions of social interaction. Furthermore, it has been suggested by many that nonverbal behaviour is also produced by the same underlying processes employed in the production of linguistic utterance and that it shares some of the structural properties of the speech it accompanies.

### **1.3. Research Strategies**

Research strategies employed in the study of nonverbal behaviour can be grouped as those following or falling within linguistic methodologies, methodologies of anthropological investigations and methodologies of psychological investigations. Note, however, that within each of these major pursuits there are several variations based on

the approaches and aims of schools within these disciplines. Also note that there are mutual influences found among these strategies. Some of the strategies are not followed widely and some have become strategies rather clearly identified with individual scholars.

### **1.3.1. Linguistically-oriented Studies of Nonverbal Behaviour**

Modern linguistics, both Indian and Western, does not include study of nonverbal behaviour as part of grammar. There are elements of nonverbal behaviour, or rather elements shared both by verbal and nonverbal behaviour, such as implied meanings (presupposition, illocutionary acts whose implications could be brought out by paraphrase etc.) that are sought to be treated within grammar in modern times. However, these attempts have become characteristics of certain off-beat grammatical studies, rather than the core or integral part of grammatical approaches and general practice. In contrast, traditional Indian studies of language always included study of nonverbal behaviour as an integral part of grammar (See below 1.3.5 for a brief descriptive statement and summary). Bloomfield (1933) distinguished between the act of speech and other occurrences which he called practical events. Any incident for him consisted of three parts, in order of time: practical events preceding the act of speech, speech itself, and practical events following the act of speech. While there is, thus, a recognition of occurrence of both speech and nonspeech acts in a communicative act, linguists generally focus upon speech rather than on the practical events preceding, accompanying and following act of speech. In general, linguists ignore the nonverbal concomitants of verbal act.

Linguistically-oriented studies of nonverbal

behaviour are, indeed, very few and those few studies also generally aim at adequacy of language description by way of describing such nonverbal behaviours that impinge on verbal behaviour and/or exploit verbal-like elements in the nonverbal act. Moreover, the linguistically-oriented studies of nonverbal behaviour extend the method of description and transcription of linguistic elements to a description and transcription of nonverbal behaviour. A clear case of linguistically-oriented description of nonverbal behaviour is that of Trager (1958). Another study is that of West (1963) who seeks to identify sign language units corresponding to linguistic units, such as words, clauses, phrases and sentences.

Trager recognizes that communication is more than language. Although linguistics aims at the description of language as a system of communication, linguists limit themselves to examination of such parts of linguistic structures as they could define and examine objectively. In view of this self-imposed restriction, communication systems other than language remain outside their purview of research. Trager finds this an unsatisfactory approach to the study of language and seeks to devise ways and means to describe systems adjunct to language. Trager calls the study of language and its attendant phenomena as macrolinguistics and divides it into prelinguistics, microlinguistics, and metalinguistics. Prelinguistics is said to include physical and biological events. The statement of the relationship between language and any of the other cultural systems constitute metalinguistics while microlinguistics is linguistics proper.

Communication, according to Trager (1958), is divided into language, vocalizations and kinesics. Language employs certain noises made by organs of speech. It combines these noises into recurrent

sequences and arranges these sequences in systematic distributions in relation to each other and in reference to external world. Vocalizations do not have the structure of language and consist of variegated noises. Vocalizations also include modifications of language and other noises. In general, vocalizations may be seen as consisting of *paralanguage*, *voice set* and *voice qualities*. Variegated noises other than language ones, and modified language and other noises together are called paralanguage. Voice set involves the physiological and physical peculiarities of noises. With the help of these peculiarities we identify individuals as members of a societal group. We identify them as belonging to certain set, age, state of health, body build, rhythm state, position in a group, mood, bodily condition and location. Many other identifications are also made. Voice qualities consist of matters such as intonation. These are recognizable as forming part of actual speech events and are identified in what is said and heard. Trager lists the following as voice qualities identified so far -- pitch range, vocal lip control, glottis control, pitch control, articulation control, rhythm control, resonance and tempo.

The voice set and voice qualities are overall or background characteristics of the voice, whereas the vocalizations are identifiable noises. All these are different from language sounds proper. Trager identifies three kinds of vocalizations constituting paralanguage. These are vocal characterizers, vocal qualifiers and vocal segregates. The vocal characterizers are laughing, crying, giggling, swickering, whimpering, sobbing, yelling and whispering, moaning, groaning, whining, breaking, belching and yawning. The vocal qualifiers are those of intensity, pitch height, and extent. Vocal segregates are items, such as uh-uh, uh-huh and uh, sh! These are sounds which do not fit into phonological and/or

word frames in sequences in a language.

Trager has viewed study of paralanguage as contributing directly to an understanding of kinesics (study of movement, posture and position individuals assume in their interaction). It may be that in their overall structure these two fields of human behaviour may be largely analogous to each other. For all the variables identified, Trager provides symbols for transcription. The scope of description of the nonverbal behaviour is limited to descriptions of sound features and their functions in manifest behaviour. Thus, even in Trager's efforts, while the importance of non-verbal behaviour for a total description of communication process is recognized, its accommodation in the discipline of linguistics is only towards an illumination and adequate coverage of linguistic behaviour. Also the method of description of nonverbal behaviour is always an extension of the methods of study of linguistic behaviours. Attempts are also made, in this process of extension, to posit corresponding levels of linguistic and nonverbal behaviour.

### **1.3.2. Anthropologically-oriented Studies of Nonverbal Behaviour**

The anthropologically-oriented studies of nonverbal behaviour have a long history. The sign languages of the aboriginals, the communicative processes carried on through (non-sign language) gestures, postures, and exchange of goods and rituals, etc., have been discussed in anthropological studies. Nineteenth century American anthropologists showed a lot of interest in the aboriginal sign languages of the Americas. They recognized that the conventional gestural codes employed by American Indians (Red Indians) are independent communication systems which have the range



and flexibility found in speech. This recognition is still continued as we find in the works of Kroeber characterizing the sign language communication as follows: 'What makes it an effective system of communication is that it did not remain on a level of naturalness, spontaneity, and full transparency, but made artificial commitments, arbitrary choices between potential expressions and meanings'. The early 19th century work by Colonel Garrick Mallery, who made a collection and study of North American Plains sign language gestures and made a comparison of the same with other codes such as gestures and sign languages of the deaf, gave an impetus to modern interests in nonverbal communication processes in the West. This interest and study influenced anthropological studies in the beginning. At one time nonverbal behaviour within anthropological studies focused only on gestures. Later on other aspects of nonverbal behaviour were also studied. And very soon, in modern anthropology, culture itself began to be viewed as communication. Yet the study of nonverbal communication, in the sense of communication as it is effected through behaviour whose communicative significance cannot be achieved in any other way, is only a recent introduction to anthropology and it is yet to establish itself fully in anthropology. However, even today the communication processes in the sense of oral and nonverbal *interaction* has not attracted much attention in anthropological studies. To quote Codere (1966) 'the subjects of gestures, medicine, or games are rarely considered in any single volume ethnography and are even more rarely given any extended treatment ... Once the major ethnographic topics of social organization, economic organization and religion are dealt with, the task is not done if it is defined as giving any sense or indication of the richness and complexity of the culture

concerned. Yet why do such topics as technology, the yearly round, and the life cycle have a secure conventional place as secondary topics; such topics as humour and the three mentioned here, no place at all; and such topics as the arts only, an occasional one'. However, in the evolution of studies on nonverbal behaviour as a comprehensive and perhaps an independent discipline, anthropology has played a crucial role. Hall's study of proxemics (See, Chapter-2) has revolutionized ideas, assumptions and identification of domains of nonverbal behaviour studies. And Hall's contributions come from anthropological bases. If the study of aboriginals' signs is considered the precursor of modern anthropologically-oriented studies of nonverbal behaviour, Hall's contributions have led the anthropologically-oriented nonverbal behaviour studies to explore areas such as proxemics that have become since then bases of ideas and assumptions as well as subject matter of experimental investigations on nonverbal behaviour. Likewise Birdwhistell's works present a formal tool for a description and understanding of nonverbal communication.

Birdwhistell's research strategy (Birdwhistell, 1970) is a clear and illustrious example of the influence of linguistics on the study of nonverbal behaviour. Influenced by developments in American structural linguistics, Birdwhistell makes a very significant contribution, adopting and effectively modifying underlying concepts, methods, and tools of transcription and description of units of language, as propounded and practised in neo-Bloomfieldian structural linguistics. According to Birdwhistell, our communication system is not something we invented but rather something which we internalized in the process of becoming man. Also, research on communication as a systematic and structured organization could not be initiated until we have some idea about the organization of society itself.

Birdwhistell contends that communication is multi-channel. It includes both language and paralanguage; it also includes gesture and kinesics. There is the inter dependence of visible and audible behaviour in the flow of conversation. Meaning includes both the contents of words and other measures. Also, not all shifts of the human body are not of equal importance or significance to the human communicational system. 'As the organs involved in breathing and swallowing are also involved in vocalic communicative behaviour, so also is the activity of the skin, musculature, and skeleton involved in communicative behaviour. Which particular behaviours are of patterned communicative value, and thus abstractable without falsification, can be determined only by the systematic investigation of the behaviour in the communicational context' (Birdwhistell, 1970). So, what Birdwhistell seeks is not idiosyncratic nonverbal behaviour but patterned behaviour within individuals and across individuals and a systematic study of the same.

Birdwhistell believes that the investigation of human communication by means of linguistic and kinesic techniques is desirable and relevant. Body motion is a learned form of communication, which is patterned within a culture and which can be broken down into an ordered system of isolable elements, just as language. Hence, Birdwhistell pursues the research for communication units based upon linguistic and kinesic analysis. The dependency of Birdwhistell's analysis of body motion on structural linguistics is seen throughout his work. He also finds that such a dependency is not without handicap:

'Techniques and theories developed over the last 2000 years of linguistic research are now and may in the future remain quite relevant for

kinesic research and are absolutely necessary to communicational research. However, these techniques are not all immediately and without adaptation transferable to kinesic research. For example, the informant technique, so basic to research on spoken language, is difficult to control in the investigation of kinesic material'.

The influence of linguistics in Birdwhistell's study of kinesic behaviour is clearly seen in his coinage of technical terms for the description of kinesic behaviour, identification of units of kinesic behaviour, correspondence of units between kinesic and linguistic behaviour, method of identification of units, description of units, transcription of units and building up of smaller units into components of larger units. In all these, we find Birdwhistell adopting terms from linguistics. Parallel between linguistic behaviour and kinesic behaviour is rather too manifestly emphasized. This does not mean, however, that Birdwhistell has simply transferred linguistics to the analysis of nonverbal behaviour or that he has nothing new to offer by way of analysis of nonverbal behaviour. Birdwhistell's contribution lies not only in showing the applicability of linguistic analytical tools and methods to kinesic behaviour, but also in providing an indepth study of kinesic behaviour itself in several cultures. He has also demonstrated the parallel characteristics of different modalities of communication. We present a few of his contributions in our chapter on proxemics.

Another significant anthropologically-oriented study of nonverbal behaviour is that of E.T. Hall (1959, 1969 and 1977). While Birdwhistell focuses his attention on the description of kinesic behaviour in formulaic expressions, involving a number of derived technical terms, Hall looks at nonverbal behaviour from a descriptive, ethnographic angle

without much technical terms and formulaic expressions. Hall's approach to study of nonverbal behaviour is decidedly anthropological and very much ethnographic and crosscultural as well as meant to be a guide for a better world of understanding, tolerance and insightful utilization of human resources; it is also linguistically influenced at least in its origins. There is not much of an influence of linguistic terms but there is a sharing of concepts from structural linguistics. However, Hall's work is more an anthropologist's study of nonverbal behaviour. His transcription system does not draw from linguistics as much as the Birdwhistell's system draws from linguistics. Also, Hall's work is more a comparative ethnographic study of nonverbal behaviour whereas Birdwhistell's approach generally restricts itself to the description of nonverbal behaviour, in particular, the kinesic behaviour, of a group without resorting to any comparison of the same with others.

E.T. Hall considers that culture is bio-basic; it is rooted in biological activities. There is an unbroken continuity between the very distant past and the present in the sense that although man is a culture-producing animal at present, there were times when there was no man and no culture. There was infra-culture that preceded culture. This infra-culture became elaborated by man into culture. Hall argues that by going back to infra-culture we could demonstrate the complex biological bases upon which human behaviour has been built at different times in the history of evolution. Infra-culture is behaviour on lower organizational levels that underlie culture. Hall suggests (along with his colleague Linguist Trager) that the number of infra-cultural bases are indeed few and bear little or no apparent relationship to each other on the surface. These are called Primary Message Systems. There are ten systems:

- (1) Interaction,
- (2) Association,
- (3) Subsistence,
- (4) Bisexuality,
- (5) Territoriality,
- (6) Temporality,
- (7) Learning,
- (8) Play,
- (9) Defence, and
- (10) Exploitation (use of materials).

Note that only the first, the primary message system of interaction, involves language. All other systems are nonlinguistic forms of communication. Hall finds that language is the most technical of the message systems. It is to be used as a model for the analysis of others. In other words, Hall implies that the analysis of other forms of communication may follow the procedures of analysis of language. He also emphasizes that in addition to language there are other ways in which man communicates that either reinforce or deny what he has said with words. Nonverbal behaviour is an integral part of culture and it includes not only acts but also material objects having the potential for communication:

'Like a telephone system, any communication system has three aspects: its over-all structure, comparable to the telephone network; its components, comparable to switch boards, wires and telephones; and the message itself, which is carried by the network. Similarly messages can be broken down into three components: sets (like words), isolates (like sounds), and patterns (like grammar or syntax). A breakdown of messages into these components, sets, isolates, and patterns is basic to understanding culture as communication'.

Patterns are implicit cultural rules by which sets

are arranged to give meaning. For example, most people take horses as a single set whereas a trainer of horses examines a number of sets such as height, weight, length of barrel, thickness of chest, depth of chest, configuration of the neck and head, stance, coat conditions, hoofs and gait. These are seen as isolates by laymen but the trainers of horses see them as sets leading on to patterns. Order, selection and congruence characterize the system of communication.

Hall's major investigations centre around man's use of space. Every living thing has physical boundary that separates it from its external environment. That space communicates is well recognized in all societies. Space as an informal cultural system is studied by Hall in all its details. Formal patterning of space has varying degrees of importance and complexity. Use of space is closely linked with status as well. Hall investigates the use of space by humans in relation to distance regulation in animals, crowding and social behaviour in animals, distance receptors such as eyes, ears and nose, immediate receptors such as skin, and muscles, visual space, and use of space in cross-cultural contexts. Hall's investigations also exploit literary works and other arts to an understanding of use of space by individuals, social groups and different language communities. Hall presents his work on use of space for a better understanding of different peoples and their cultures, and for a better world of living and understanding. He finds that literally thousands of our experiences teach us unconsciously that space communicates. A painstaking and laborious process awaits one who wishes to uncover the specific cues. The child who is learning the language cannot distinguish one space category from another by listening to others talk (examples are, He found a place in her heart, He has a place in the mountains,

I am tired of this place, and so on). In spite of this the children *are* able to make the difference between various space terms from the very few cues provided by others: Space as an informal cultural system is different from space as it is technically elaborated by classroom geography and mathematics. Hall seeks to identify what space is in various cultures, how it is interwoven with individual and social behaviour, how space comes to communicate various values and how its use becomes the diagnostic marker of various individual and social values. Hall is the one who systematized the study of space in human interactions and brought out various crucial facts underlying use of space. All this he does taking an interdisciplinary attitude, but all the same the approach is anthropologically-oriented.

It is seen from the study of literature on nonverbal behaviour that modern growth of explicitly stated studies in communicative nonverbal behaviour in communicative interactions, especially in the United States, indeed, is closely linked with the contributions of Trager, Birdwhistell and Hall. Trager's contributions remained an island, continue to be so even now within linguistics, which, while giving a spurt to investigations of language-related disciplines, has somehow continued to treat nonverbal behaviour studies as a peripheral matter. A remarkable fact is that in spite of the very many attractions within his own paradigm, calling him to go beyond language variables and to attack variables that impinge on nonverbal behaviour, the linguist in Trager has not strayed beyond what is strictly and formally linguistic (according to Trager) and relevant to an understanding of nonverbal behaviour. Birdwhistell's investigations continue but not with many adherents, and yet his investigations have a distinct bearing on studies of nonverbal behaviour. Hall's work is



largely absorbed in the current experimental investigations of nonverbal behaviour although it is generally restricted only to some aspects of nonverbal behaviour. Hall's work, unlike those of many other authors, has also caught the imagination of popular science writers leading on to both insightful and not so insightful investigations of nonverbal behaviour, and to speculations. All said and done, anthropologically-oriented approaches to the study of nonverbal behaviour is a continuing and positive aspect of nonverbal behaviour studies and enriches the experimental investigation by providing possible and insightful variables for research and for cross cultural validation of experimental findings.

### **1.3.3. Psychologically-oriented Approaches to the Study of Nonverbal Behaviour**

The psychologically-oriented approaches to the study of nonverbal behaviour are many and they currently dominate the nonverbal communication research scene. Some psychologically-oriented studies focus upon the association of psychological states with nonverbal behaviours. The nonverbal behaviours are taken to be indicative of underlying psychological states. In these studies description of nonverbal behaviour is linked with the description of psychological states of the individuals emitting nonverbal behaviour. In another approach, the studies focus upon observers. The observers are asked to interpret the given nonverbal behaviour in terms of psychological states. These are studies that involve decoding of nonverbal behaviours presented to observers. In encoding studies, different situations, to which corresponding attitudes are explicitly ascribable and clearly linked and elicited, are identified, subjects are placed in these situations and their responses measured. These studies are generally of a role playing type. There is also another approach in which various choices

of nonverbal behaviours are presented to subjects. They are asked to indicate their preference among the given nonverbal behaviours for specific social situations. That is, subjects are asked to choose among forms or combinations of behaviour to communicate various attitudes. Evaluating these approaches, Mehrabian (1972) suggests that whereas encoding methods are appropriate in the beginning stages of communication research, the last mentioned above, which he calls the encoding-decoding method, is appropriate for highly developed phrases of nonverbal behaviour research.

The psychologically-oriented approaches have led to a wider coverage of a variety of nonverbal behaviours. Currently studies of all forms of nonverbal behaviour, such as crowding, space utilization, visual behaviour, facial expressions, abnormal nonverbal behaviour are generally initiated and enriched by the emergence of psychologically-oriented researches. These researches can be traced back to the beginning of modern psychological investigations. After all, retrieval of meanings of human behaviour, and interpretation of human behaviour have been the major purpose of psychology. The specific communicative means of behaviour have always been subject matter of investigation along with the behaviour itself. A salient feature of psychologically-oriented studies of nonverbal behaviour is the exploitation of statistical measures which are generally not resorted to (or even avoided) in the linguistically and anthropologically-oriented studies. Also, in contrast to linguistically and anthropologically-oriented studies, the psychologically-oriented studies of nonverbal behaviour are mainly experimental studies, hardly based exclusively on observations. These studies are generally based on individual psychological factors, rather than on social factors, although the social function is not lost sight of.

Moreover, the feelings, attitudes and evaluations of individuals are the basic referents of nonverbal behaviour in these studies. Confirmation of these behaviours across statistically significant sets of populations leads on to the social basis, and to confirmation and revelation of the social function of thus proven nonverbal behaviours. In addition, these studies also aim at identification of variables of nonverbal behaviours in communicative contexts. For example, some studies focus on status, positiveness, etc.

Generally speaking, the psychologically-oriented studies of nonverbal behaviour are typically articles in research journals based on controlled experiments focusing on limited variables. Validation or rejection of hypotheses, description and explanation of processes involved and an attempt at bringing out a hierarchy of events and variables involved and the hidden processes through an understanding of manifest processes become the focus of these psychologically-oriented studies of nonverbal behaviour. All aspects of nonverbal behaviour are sought to be dealt with under experimental conditions. Accordingly a lot of energy is expended not on identifying facets and aspects of nonverbal behaviour *per se*, but on means to bring out the observed nonverbal behaviour variables in a form suitable for controlled experiments. The significance of these variables are hypothesized beforehand and their validity proved or disproved in the experiments. In the process, however, several new meanings hitherto hidden are identified and a pattern as well as a hierarchy is established. The psychologically-oriented studies of nonverbal behaviour, naturally, are influenced by various models of psychology, particularly of learning. The psychologically-oriented studies of nonverbal behaviour, in a manner of speaking, have become the central part of all nonverbal behaviour studies.

These studies are more in number, cover most of the aspects of nonverbal behaviour, attract more investigators and students, and accommodate findings on nonverbal behaviour worked out in other fields, such as linguistics, anthropology and semiotics.

Since most of the psychologically-oriented studies are independent articles, the overall assumptions of psychologically-oriented nonverbal studies are not generally explicitly stated. Mehrabian (1972) suggests that any attempt at a comprehensive description of findings in the study of nonverbal communication has to include the large numbers of behavioural cues that are studied (e.g., eye contact, distance, leg, and foot movements, facial expressions, voice qualities). Further, the description should also account for the relationships among these cues, the relationships between these and the feelings, attitudes, and personalities of the communicators, and the qualities of the situations in which the communications occur. Note that this scheme is carried out with well designed tools of questionnaires administered orally or visually under appropriate situations for both controlled and experimental groups. Also, appropriate statistical measures are applied to data thus obtained to prove or disprove proposed hypotheses.

#### **1.3.4. Semiotically-oriented Studies of Nonverbal Behaviour**

Where psychologically-oriented studies of nonverbal behaviour restrict themselves to empirical methods and findings, subjecting them to statistical measures and arriving at theoretical models that are generally found in psychology proper, semiotics draws facts from different disciplines and views them from the points of view of sign theory or theories. There is no experiment conducted as

a matter of routine, or as a norm in semiotic investigations. Observation, and reasoning out the inter-relationships between observed facts, identification of patterns, validation of facts based on patterns worked out, and identification of/ or bringing out manifestly the covert processes through proposals as regards patterns and dynamic processes dominate semiotic investigations. There is, indeed, no model building in semiotic investigations in the sense of forming schools and restricting pursuits within the assumptions and postulates of the school. However, there is a body of knowledge contributed by different scholars as regards the nature, function and componential features of signs and their inter-relationships. There are also procedures, generally not stated explicitly but found practised in most of the semiotic investigations.

The semiotically-oriented studies of nonverbal behaviour view it as constituting semiotic systems involving various types of signs. Investigations may be carried out based on models of experimental psychology by individual authors. They may, however, build their theory and explanations in a semiotic fashion, taking the sign values of facts as crucial. The semiotic analysis of nonverbal behaviour is mainly the interpretation and explanation of data collected through other means. This interpretation and explanation, however, leads on to newer insights and identification of hitherto unknown facts. This is, indeed, one of the major strengths and achievements of the semiotic method. The semiotically-oriented studies of nonverbal behaviour, generally speaking, compare and contrast the verbal with the nonverbal behaviours. This comparison and contrast takes on the presentation of features involved in a binary opposition. It is also shown as to how the features balance themselves in a communicative act. In this analysis,

hidden processes and new information and variables are also revealed and added on.

A sign is everything which can be taken as significantly substituting for something else. This something else does not necessarily have to exist or actually be somewhere at the moment in which a sign stands in for it. Saussure (1915) implicitly regarded sign as a communicative device taking place between two human beings intentionally aiming to communicate or to express something. Not all signs are, however, communicative signs. For example, black clouds are a sign of rain, but we do not communicate with it; the clouds do not respond to us. The communicative signs are all artifacts expressed by persons. Unless there is a response to a sign, the sign cannot be interpreted and is not considered a communicative sign. As Cherry (1980) points out, any artifact may possibly be a sign (a scratch on a stone, a printed mark, a sound -- anything), but its signhood arises solely from the observer's assumption that it is a sign: 'Signs are outward happenings and thus are observable, which calls for interpretation, or meaning. Such interpretation is of course mental (not observable) so it is revealed by a *response sign or reply*. All signs require another sign to interpret them; no event can exist as a sign in isolation. Sign can operate only within a working system of signs' (Cherry, 1980). Note that nonverbal behaviour does fall within the system of signs directly and immediately, because nonverbal behaviours are acts of communication.

Peirce (1931-1935) finds sign as something which stands to somebody for something in some respects or capacity. Morris (1938) suggests that something is a sign only because it is interpreted as a sign of something by some interpreter. Eco (1977) defines sign as everything that, on the

grounds of previously established social convention, can be taken as something standing for something else. It has also been defined as a proposition constituted by a valid and revealing connection to its consequent, when this association is culturally recognized and systematically coded.

Half a dozen possible relationships are empirically found to prevail between the signifier and the signified. Signifier is the sound or visual image of a sign. Signified is the concept aspect of a sign. Both the signified and the signifier are dialectically united in the sign. The six species of the sign are as follows (Sebeok, 1976):

- (1) **Signal:** When a sign token mechanically (naturally) or conventionally triggers some reaction on the part of a receiver, it is said to function as a signal. Examples of signals are the exclamation 'go!' or alternatively the discharge of a pistol to start a foot race.
- (2) **Symptom:** A symptom is a compulsive, automatic, nonarbitrary sign, with a natural link between it and what it signifies. For example, bodily symptoms indicate the underlying disease.
- (3) **Icon:** A sign is said to be iconic when there is a topological similarity between it and what it signifies. Examples are pictures, diagrams, etc.
- (4) **Index:** A sign is said to be indexical in so far as it is contiguous with what it signifies. Indexes give physical indication. Examples are compass, needles, weather vanes, footprints and droppings of animals, etc.

- (5) **Symbol:** A sign is said to be a symbol when it does not have similarity or continuity with what it signifies, but a conventional link between them is established. Examples are badges, flags, etc.
- (6) **Name:** A sign which has an extensional class for its designatum is called a name. In accordance with its definition, individuals denoted by a proper name as *Veronica* have no common property attributed to them save the fact that they all answer to *Veronica*.

Note that of the six types of signs listed above, signal, symptom, icon and index fall within nonverbal domain fairly comprehensively and fully. There are elements of symbol as well in nonverbal communication, but these are of a limited quality and quantity. The sign *name* is perhaps nonexistent in nonverbal communication and its nonexistence is probably a distinguishing mark of nonverbal communication. There are also scholars who consider all the six types of signs occurring in nonverbal communication.

Semiotic approaches to the study of nonverbal communication focus more on the dialectics within nonverbal behaviour, on how patterns are formed, and on how the inter-relationships between verbal and nonverbal communication balance themselves in communicative contexts. Coupled with the experimental investigations and findings of psychologically-oriented studies of nonverbal communication, the semiotic approaches to the study of nonverbal communication, indeed, dominate the current assumptions and procedures in studies on nonverbal communication.



### 1.3.5. Indian Studies of Nonverbal Behaviour

Traditional studies of nonverbal behaviour by Indian scholars link the nonverbal behaviour of every day life with those of performing and other aesthetic arts and see these behaviours in terms of their exploitation and function in these arts. In other words, nonverbal behaviours are seen as something which occur in nature, in normal communication and as something not fully at the conscious level. These unconscious acts are studied to reveal their communicative nature and to bring out their functions and patterns. In the process of study, the roots of nonverbal behaviour in language, social acts and biology are emphasized. While every act of nonverbal behaviour has its basis in language, society and biology, their exploitation, use, and the manner of their use is based on the psychological need and state of the individual. The ultimate goal of the study of nonverbal behaviour is their exploitation for effective communication in aesthetic arts, for enhancing the aesthetic value of the communication resorted to. It is then seen as an effective tool for aesthetic communication, providing a variety of techniques and a variety of acts. Because the study of nonverbal behaviour is tied to performance, their physical manifestation in the body and the intent of these manifestations to represent underlying psychological needs and states were emphasized. Since in the view of Indian scholars there is a unity of purpose between poetry and drama, indeed, between all arts, physical manifestation of nonverbal behaviour as representations of underlying psychological needs and states is included in every art, in poetry through appropriate description and metaphor using language, in sculpture through direct, indirect and oblique representation of nonverbal acts as physical manifestations, and in dance combining both poetry and sculpture

adding to the combination the dimension of movement and symbol.

A chief characteristic of Indian studies of nonverbal behaviour is the inclusion of the same in grammar. For example, Indian traditional grammars include not only the description of intonation patterns and their functions within their scope but also other paralanguage features meant for sarcasm, doubt, emphasis, contradiction and specific identities of registers. This is sought to be achieved in two ways -- one, by a direct description and analysis of utterances in terms of their functions in communicative contexts just as in linguistic description which present how segmental sounds and sentence intonations get elliptical in the speech of certain professional groups; secondly, by identifying linguistic mechanisms that carry these nonverbal acts, as in the case of prolonging the pronunciation of consonants for certain effects. Also, Indian traditional grammars have developed so as to include separate chapters on nonverbal behaviours, and their import for poetry and other aesthetic arts. The incorporation here with linguistic facts is sometimes peripheral, at times not relevant, but many a time highly relevant for effective communication, choice of diction and standard speech. Thus, by incorporating chapters on nonverbal manifestations, the grammars focus on the performative factors of speech as well, apart from forming a bridge between language of every day discourse and the language of poetry and aesthetic arts. Then, by the mere inclusion of study of nonverbal acts, the overall goal of grammar and its learning is changed. History has not, however, seen to it that what began originally as a descriptive-cum-prescriptive approach to account for the then prevailing practices grew wide and dynamic enough to be alive to the changes in practices

or to further develop the system of research applicable to matter other than texts.

In the Sanskrit school of grammar, nonverbal behaviour is prominently discussed within *rasa* theory. The theory of *rasa* is intimately connected with the theory of *dhvani*. It forms the most important aesthetic foundation of Sanskrit poetics. It first appears in the dramatic theory of Bharata; originally in connection with drama (explicit nonverbal behaviour), then as one of the essential factors of poetic theory (description of the nonverbal as suggestive of the underlying intent). While the theory of *rasa* itself is older than Bharata (500 B.C.?) the general conditions of the theory as fixed by Bharata continue to be accepted as the basis.

Elevation of nonverbal communication to aesthetic status and the exploitation of modes of nonverbal communication for aesthetic purposes is clearly seen in the concept of *abhinaya* in treatises on drama and dance, in essence on theatrical performance. *Abhinaya*, according to Bharata Muni (*Nāṭyaśāstra* Chapter IV : verse 23, translation as found in Ghosh, 1967) has four kinds of histrionic representation, or shall we say that communication is carried on through four kinds of means in dance and drama. These are *āṅgika* which deals with bodily movements in their subtle intricacies, *vācika* which refers to vocal delivery, *āhārya* is communication via costume and make up and *sāttvika* is communication through the accurate representation of the mental and emotional feelings. All these are physical manifestations. The *āṅgikābhinaya*, which is the visible form of communication through bodily gestures and facial expressions, is certainly primary nonverbal communication mode; there is an insistence on the need for gestures and facial expressions to be in consonance with one another.

Communication through perceptual factors such as costume and make up, and the physical manifestation of mental states and emotional feelings are also emphasized for a successful performance. The role of vocal delivery is not minimized either in the process of communication. The practice of representation in a dramatic performance is two fold: realistic (Natural, popular) *lokadharmi* and conventional (theatrical innovation, and used conventionally) *nāṭyadharmi* (*Nāṭyaśāstra*, Chapter VI and verse 24, as found in the translation of Ghosh, 1967). In other words the communication in aesthetic arts is carried on both by natural (realistic) and conventional signs. Of all the modes of non-verbal communication, gestures and implied meanings in oral delivery have been given a pointed attention in the elucidation and exploitation of nonverbal communication for aesthetic arts. We present the salient features of gestural communication as used in Indian aesthetic arts in Chapter 5, section 5.4.5. As regards implied meanings we may make a brief statement here on the role of suggestion treated in the Dhvani School of Sanskrit scholars, since we do not deal with the Indian position in Chapter 4 which discusses nonverbal characteristics of language use and silence. In course of our discussions on the scope and definition of nonverbal behaviour we suggested that implied meanings, through an absence of linguistic units, are a form of nonverbal expression. In the *dhvani* school of poetics, it is suggestion/implied meaning that is considered the essential characteristic of good poetry. The *dhvani* school, in its analysis of the essentials of poetry, finds that the contents of a good poem may be generally distinguished into two parts. One part is that which is expressed and thus it includes what is given in words; the other part is the content that is not expressed, but must be added to it by the imagination of the reader or the listener. The

unexpressed or the suggested part, which is distinctly linked up with the expressed and which is developed by a peculiar process of suggestion, is taken to be soul or essence of poetry. The suggestive part is something different from the merely metaphorical. The metaphorical or the allegoric, however veiled it may be, is still in a sense expressed and must be taken as such; but the suggestive is always unexpressed and is therefore a source of greater charm through its capacity for concealment; for, this concealment in which consists the essence of art, is in reality no concealment at all. The unexpressed in most cases is a mood or feeling (*rasa*) which is directly inexpressible. The *dhvani* school took up the moods and feelings as an element of the unexpressed and harmonized the idea of *rasa* with *dhvani*. It is suggested that poetry is not the mere clothing of agreeable ideas in agreeable language. In poetry, the feelings and moods also play an important part. The poet awakens in us, through the power of suggestion inherent in words or ideas, the feelings and moods. *Rasa* is brought into consciousness by the power of suggestion inherent in words and their sense. Thus, nonverbal communication in aesthetic arts is viewed in Indian treatises as spectacular presence of physical manifestation and suggestive absence of vocal elements.

In the Dravidian School of Grammar (Tolkāppiyam of pre-Christian era, 300 B.C.?) also, description and study of nonverbal behaviour is an integral part of grammar, poetry and drama. Nonverbal communication is seen anchored on to physical (and physiological) manifestations. The term used to refer to the nonverbal itself clearly reveals that the idea of nonverbal communication is grounded in physical and physiological manifestations. **meyppātu** (**mey** meaning body and **pātu** meaning the acts based on body or expressed through bodily

acts) is the term used to refer to those manifestations which appear on the body of an individual as a sign of what goes on inside the mind. Those manifestations for whose understanding there need be no deliberation and whose occurrence is revealed (in poetry and drama) in a natural manner through the bodily acts form the scope of the study of nonverbal behaviour. Tolkāppiyam presents eight types of **meyppātu**. All of these are grounded in bodily manifestations. Each one of these eight manifestations is related to four moods or feelings. These moods or feelings may be either causative or consequential. In other words, the major eight manifestations are related to 32 different types of moods/feelings; the latter could be either the causative mechanisms or consequential results. Commentators have differed among themselves as to the content of 32 items, but not on the essentiality of body acts for nonverbal communication, it being the natural, external manifestation of internal states, and its retrievability and comprehension without deliberation. It is also considered an essential component of poetry. The grammar prescribes that the poets are not to refer to the feelings as such experienced by the individuals but only to the external manifestations on the body. By reference to the bodily manifestations, and with the help of such references, the reader retrieves the causative and consequential contexts of the poem, its intent and so on. Because of this device, suggestion reigns supreme in poetry. The injunction that the poet is not to refer directly to the feelings of characters but only to bodily manifestations, while recognizing the communicative function of bodily manifestations, aims at making a poem more suggestive and open for varied interpretations and enjoyment. The nonverbal mode is considered a tool to express the internal states. The scheme also includes certain verbal acts as part of the nonverbal. 'We see that even speeches

by the heroine and others have been included as forming part of the (nonverbal) group. If the speeches are mere expressions of inner thoughts they are speeches. But if they are emotional outbursts of inner commotion and feeling they are certainly **meyppāṭu**. If we closely scrutinize the list of **meyppāṭus** in Tolkāppiyam we will see that only such emotional expressions have been listed under **meyppāṭu** (Sundaramurthy, 1974). Suggestive power includes under the rubric of the nonverbal whatever has been left out, not said, in the verbal act but is communicated because of their being left out, not said, in the verbal act. Another dimension included is that the nonverbal also includes the verbal if the latter is one of emotional outcome. Note that these view points are also currently held in modern studies of nonverbal behaviour (See Mehrabian, 1972). Also note that in traditional Indian treatises the nonverbal exploits both aural and vision media. The same classification of the nonverbal we find in the traditional Indian grammars is also found in several modern studies of nonverbal behaviour.

### 1.3.6. Literature and Text-oriented Studies of Nonverbal Behaviour

Creative artists provide insights into human mind, human behaviour, and individual and social thought and behaviour. Both intuitive observations and empirical experimentations of nonverbal behaviour benefit a lot from absorbing what the creative artists have to say on various facets of nonverbal communication and what they have identified and exploited as regards nonverbal behaviour and communication in their works. Creative artists are similar to the investigators who prefer to use mainly their own intuitive analysis, but with one difference. The investigators may tend to look at an object and/or a phenomenon with their

own set of rules, ideas and concepts whereas the creative artists may look at the same object and/or phenomenon from so many different angles, rather get into the soul and body of their characters, that a comprehensive picture is provided by them. Note, however, that such a picture is at times quite far from reality.

In literature, the nonverbal behaviour modes depicted by authors may illumine the content or be itself the content of the literary work. The texts provide records of nonverbal communication of the past as well as of the present. They may be in codified ritual texts, in didactic works, in religious discourses, or in literary or folk episodes handed down from generation to generation. These provide a clue to the belief system of the societies, provide the world view of the society whose behaviour it regulates or had regulated. Textual analysis gives us rare as well as frequent practices, indicates the significance of nonverbal communication across several social and spatio-temporal levels. The past is linked with the present in the textual analysis. The present is more clearly revealed in the past and its understanding. Textual analysis requires several tools -- semantic analysis, morphological and syntactic description, correct identification and interpretation of the act described in the text and establishment of linkage between items across texts. Assessment of correctness of interpretation requires several measures such as identification of roots of words, morphological patterns, syntactic comparison and establishment of patterns. The most important function of analysis of nonverbal behaviour as found in texts is the understanding of current behaviour that is narrated.

Textual analysis opens up a mine of information. In literary texts, such as novels, story is carried



on and established by what the characters say (linguistic behaviour) and by a description of the nonverbal act indulged in by the characters. Punctuation marks are but only one device which give focus to some paralinguistic features. Other nonverbal communicative acts are revealed in terms of proxemic behaviour, expressions via eye and face, kinesics, use of implied meanings and so on. A large part of the author's narrative, without any one being aware of it, is aimed at the description of nonverbal communicative acts of the characters. Thus, because of infinite possibilities for human stories and acts, and because of insightful observations and artistry of the authors, literary texts also become a mine of information for those who propose to study nonverbal communicative acts.

The paralinguistic characteristics are conveyed by the authors in two ways -- through the use of punctuation marks using both conventional ones and those specifically created ones by the authors themselves. The punctuation marks are of a limited quantity. Not many have been really added to the set available, and in Indian languages they were largely adaptations from European languages. Repetition of a punctuation mark, reversal of its placements (in contrast to normal practice), omission of a punctuation mark where it would be generally expected to be used, some peculiar devices either specially defined or brought from a stock of symbols used elsewhere for other purposes but now sought to be used as a punctuation mark, tinkering with the spelling are some of the initiatives one notices in this area. Another device resorted to, to give an aura of the paralinguistic characteristics, is their description sometimes through metaphorical transfer, sometimes through foregrounding processes (foregrounding refers to the stimulus which is not culturally expected in a social situation; when foregrounding

of something takes place, it provokes special attention; foregrounding is generally an intentional distortion of the linguistic), many a time by impregnating an ordinary word with potent meanings.

Poyotos (1977) suggests that it is the depiction of the linguistic-paralinguistic-kinetic structure of the people involved in the story that conveys a feeling of authenticity and becomes a vehicle to transfer what the author has created to the mind of the reader. Nonverbal communication, in the hands of authors, performs six functions, according to Poyotos. Nonverbal communication brings about physical realism, distorting realism, individualizing realism, psychological realism, interactive realism and documentary realism in literary texts. Physical realism conveys the sensorial perception of people's behaviour. Physical realism is differentiated from psychological realism. In psychological realism, the narration of the author delves into the subtle inner reactions, which may be both body and purely mind-based. In distorting realism, the literary, or artistic, expressionistic rendering of physico-psychological reality is 'meant to ridicule, to offer a caricature of reality, or, truly to show what the eyes cannot see'. Individualizing realism is shown in 'the conscious effort to differentiate the characters as to their physical and psychological characteristics, by means of their verbal repertoires and, in the best cases, by their nonverbal ones as well'. Poyotos sees interactive realism employed by authors as 'a thoughtful depiction of the mechanism of conversation mainly in face to face encounters'. The documentary realism is historical realism and is a consequence of physical realism as regards depiction of nonverbal behaviour. Ritualistic and etiquette behaviours, occupational activities, general task-performing activities, and activities

conditioned by clothes, hairdo, furniture, etc., are part of this realism.

Poyotos also identifies four ways by which the authors usually transmit the nonverbal behaviours in the narrative text. One way is by describing the behaviour and explaining its meanings. This is plain and has been exploited for a long time. Although this method is plain, it, in no way, diminishes the story telling so long as the artistry and content of the story are superb and associated with some greatly influential thoughts. Also note that this plain way of presenting nonverbal behaviours may be dictated by the current practices in story telling and could also be a stylistic marker of individual authors. Another process of transmitting nonverbal behaviour is by describing the behaviour without explaining the meaning. This is generally meant for a contemporary audience familiar with the meanings of the nonverbal behaviour described. Also note that in contemporary contexts, an obtuse nonverbal behaviour when described, but without its meanings explained, becomes a technique of narration, leaving more to the personal abilities and sensitivities of readers to retrieve the meanings. A third way is by explaining the meaning without describing the nonverbal behaviour. This meaning may or may not be fully understood by the reader in the same manner it is meant by the author. Another method of presenting nonverbal behaviour in the narrative text is 'by providing a verbal expression always concurrent with the nonverbal one, which is important, but not referred to at all'.

Poyotos also finds that the nonverbal repertoires of the characters play four definite and important functions in narrative technique. These are initial definition of the character, progressive definition, subsequent identification and recurrent identification

of characters. Initial definition of the character is done by means of one or more idiosyncratic linguistic, paralinguistic and/or kinesic features. These features include use of verbal expletives, personal choice of words, a particular tone of voice in certain situations, a gesture, a socially but individually conditioned way of greeting others, other manners and mannerisms, a typical posture which we can identify as a recurrent behaviour, etc. Progressive definition of characters through nonverbal behaviour is by means of adding gradually new features as the story proceeds. 'A feature adds to another feature previously observed, complements it, builds up the physical as well as the psychological or cultural portrait, and assists the reader in the progressive total appreciation of the narration'. Subsequent identification of characters through nonverbal behaviour is by means of repetition for the first time of a feature or features. Such a repetition immediately not only brings back the image but also does it at a point in the story when the readers may confuse between characters or may have forgotten the characters' external personalities. Repetition may focus upon verbal expletives, gestures, peculiar tones of voice, etc. Finally, the recurrent identification of characters through nonverbal behaviour is by means of a known feature repeated as many times as necessary at varying intervals in the narration.

Thus, in a narrative text, the depiction of nonverbal behaviour has several functions to perform -- it carries the burden of the story; it complements what the characters say; without such a complementation a comprehensive locale and content cannot be built for the story to proceed further and be comprehended by the readers. The depiction of nonverbal behaviour also provides various types of realism to the story, while providing at the same time various means at the disposal

of the author -- various processes to define the characters and to retain and recall such definitions to meet the demands of the story as well as the artistry.

Both textual analysis and the analysis of literary works provide us with insightful identification of the types, function and defining characteristics of nonverbal communicative acts. Empirically-oriented experimental investigations of nonverbal communicative acts can draw from this mine of information so as to fashion the acts for controlled experimental studies.

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## CHAPTER 2

### Proxemics

#### 21. Proxemics

*Proxemics* is the term coined by Professor Edward T. Hall, author of such well known works as *The Silent Language* (1959), *The Hidden Dimension* (1969), and *Beyond Culture* (1977), to refer to 'the study of how man uses space – the space that he maintains between himself and his fellows and which he builds around him in his home and office'. It is the study of the ways in which individuals use physical space in their interactions with others and how this use of physical space influences behaviour of all concerned. In the words of Professor Hall, proxemics studies 'how man unconsciously structures microspace – the distance between men in the conduct of daily transactions, the organization of space in his houses and buildings, and ultimately the layout of his towns.'

Proxemic research is based on the concept of territoriality. Territoriality is a basic concept in the study of animal behavior. It is defined as behaviour by which an organism characteristically lays claim to an area and defends it against members of its own and other species. Occupation, cultivation, preservation and utilization of space in transactions.

species, plays a crucial role in the preservation, growth and development of the species. Occupation, cultivation, preservation and utilization of space is an intergral part of the culture of the species. The manner of occupation, cultivation, preservation and utilization of space between members of a group and across groups in humans is transmitted through culture. Culture transmission thus determines the nuances of space through generations. Since 'most of culture lies hidden and is outside voluntary control, making up the warp and weft of human existence', proxemics is also hidden and is unconsciously practised. In addition, there is also the dimension of ontogeny of proxemics in young members of a group, which closely has links with physical, cognitive and linguistic maturational milestones of development undergone by children.

Since proxemics is part of culture and is guided and influenced by culture transmission, anthropologists like Hall have investigated occupation, cultivation, preservation and utilization of space by humans from the anthropological view points, and linked the same with art, literature, architecture, etc. Within a culture, and as intercultural communication, occupation, cultivation, preservation and utilization of space is also investigated in social psychological terms. Research on personal space deals with the meaning of space to the individual in terms of the effects of crowding, territoriality, architectural design, etc. Both the approaches, the anthropological approach taking proxemic behaviour as embedded in and instigated and guided by culture, and as behaviour determined by cultural factors and applicable to groups professing the culture, and the social-psychological approach taking proxemic behaviour essentially as an interpersonal communication, generally without reference to cultural factors

but having them as background for investigation, have contributed a lot for an understanding and description of proxemic behaviour. Hall (1969) recognizes that although research in proxemics has been restricted to culturally specific behaviour and although it does not encompass other environmental or personality variables, the latter are important for an understanding and description of nonverbal behaviour.

These two approaches are reflected in the manner in which investigation of nonverbal behaviour is carried out. The culture approach to the study of proxemic behaviour generally adopts naturalistic observation as the major technique whereas the investigation following the social-psychological approach to the study of proxemic behaviour generally adopts laboratory experimentation. Harper et al (1978) classifies the empirical research conducted on proxemics into (i) individual and group differences in personal space where personality, demographic, and cultural variables are the primary focus, (ii) studies focusing on interpersonal variables such as interpersonal attraction, interpersonal distance and arousal and responses to invasions of personal space, (iii) the effects of environment and variations in physical setting that affect population density, and (iv) studies on touch. Most of these empirical studies are made with experimental designs, and only a few follow the course of naturalistic observation.

## **2.2. Hall's Proxemics**

Hall suggests that proxemics is the hidden dimension of human culture which we practise unconsciously all the time. He argues that it is impossible for man to divest himself of his own culture. Culture has penetrated to the roots of man's nervous system and it determines how



he perceives the world. Hall argues that by examining proxemic patterns we will be able to reveal hidden cultural frames that determine the structure of a given people's perceptual world. Proxemic research looks for patterned distinctions while studying individual differences; it aims to identify the role of proxemic behaviour in the social matrix. Since proxemic behaviour is an unconscious behaviour, it resembles the phenomena akin to tone of voice, or even stress and pitch in a human language. Being built into the language, these features are hard for the speakers to consciously manipulate. Likewise proxemic behaviour, born of culture and built into the social matrix, is an unconscious behaviour, and is hard to manipulate consciously.

Based on observation of human beings in social situations, Hall (1969) classifies the distances maintained by humans into intimate, personal, social and public distances. Each of these distances has a range from a close phase to far phase. At intimate distance, the presence of the other person is unmistakable and may at times be overwhelming because of the greatly stepped up sensory inputs. Sight (often distorted), olfaction, heat from the other person's body, sound, smell and feel of the breath all combine to signal unmistakable involvement with another body. Personal distance designates the distance consistently separating the members of noncontact species. It might be thought of as a small protective sphere or bubble that an organism maintains between itself and others. In the social distance, intimate visual details in the face are not perceived, and nobody touches or expects to touch another person unless there is some special effort. The boundary line between the far phase of personal distance and the close phase of social distance marks the limit of domination. People who work together tend

to use close social distance. It is also a very common distance for people who are attending a casual social gathering. Impersonal business occurs at this distance. Public distance is well outside the circle of involvement. Several important sensory shifts occur in the transition from the personal and social distances to public distance.

The hypothesis behind the proxemic classification system is this: it is in the nature of animals, including man, to exhibit behaviour which we call territoriality. In so doing, they use the senses to distinguish between one space or distance and another. The specific distance chosen depends on the transaction, the relationship of interacting individuals; how they feel and what they are doing. Proxemic patterns simultaneously consolidate the group and isolate it from others by reinforcing intragroup identity and making intergroup communication more difficult. Also proxemic patterns differ in different cultures. Space perception is not only a matter of what can be perceived but what can be screened out. Man's sense of space is closely related to his sense of self, which is in intimate transaction with his environment. Man can be viewed as having visual, kinesthetic, tactile, and thermal aspects of his self which may be either inhibited or encouraged to develop.

Hall identifies eight dimensions of proxemic behaviour. These are (i) postural-sex identifiers (sex and postural status of the interactants), (ii) sociofugal-sociopetal axis (face to face Vs. back to back positioning of shoulders), (iii) kinesthetic factors (the different distances between persons that provide a capability for touching one another), (iv) touch code, (v) visual code (based on retinal areas used, for example, the use of fovea for direct gaze), (vi) voice loudness, (vii) thermal code (the heat transmitted by a human body),

(viii) olfaction code (the presence and degree of undifferentiated breath and body odours). Many of these dimensions encompass some aspects of the other nonverbal behaviours considered separately, namely, the voice, kinesics, and visual behaviour. However, underlying all of these dimensions is the factor of physical distance which, other things being held constant, will determine how much we hear, see, feel, smell, etc. Indeed, distance, that is, manipulation of distance, can be considered a necessary (but not a sufficient) condition for nonverbal communication itself.

Proxemic behaviour is seen by Hall (1969) as a function of eight different dimensions listed above. He considers this total of eight classes of events as sufficient to describe the distances and the means determining distances employed by man. The systems are biobasic, rooted in the physiology of the organism. Not all of the eight factors are of equal complexity, nor do all of them function at all times. The thermal and olfaction inputs are present only at close distances. Vision is more complex than either of these, and it is normally screened out only at very close distances.

The postural-sex identifiers determine the sex and basic posture of the two individuals -- whether they are standing, sitting, squatting or prone. These are the minimum distinctions. The sociofugal-sociopetal axis describes the spatial arrangements or orientations that push people apart and pull them in -- orientations that separate and combine people, that increase interaction or decrease it. The kinesthetic factors revolve around the potential to strike, hold, caress or groom.

In essence, Hall's proxemics studies types of distance (intimate, personal, social and public),

features of space (fixed feature space, such as buildings, semi-fixed feature space wherein activities are organized and objects manipulated, and informal space, such as space maintained between interactants without being aware of it), identifies the means (media) that are exploited for proxemic communication (postural-sex identifiers, sociofugal-sociopetal axis, kinesthetic factors, touch code, visual code, voice loudness, thermal code and olfaction code), discusses the relationship between distances and media, and the biological bases of media. It studies also the hierarchy of media and their functions in communication, based on the phylogeny of media. How the types of distances, various types of media and the interrelationships between the two are exploited in a culture and across cultures is also focused upon. Other areas of investigation covered are as to whether there are universals in patterns of proxemic communication, whether such universals are conditioned by biological bases, the role of language in proxemic behaviour, the function of language-like utterances in proxemic behaviour, and proxemic behaviour vis-a-vis socialization processes. Hall's proxemics is based on the assumption that in spite of the fact that cultural systems pattern proxemic behaviour in radically different ways, the proxemic behaviours are deeply rooted in biology and physiology. Secondly, proxemic behaviour is patterned and we seek the patterns and not individual differences in the study of proxemic behaviour. Thirdly, communication occurs simultaneously on different levels of consciousness ranging from full awareness to out of awareness. Fourthly, by making observations of the way animals handle space, it is possible to learn an amazing amount that is translatable to human terms.

### **2.3. Empirical Research on Proxemic Behaviour**

As already pointed out, empirical research

on proxemic behaviour has been conducted generally under three areas (Harper, et al 1978): individual differences in proxemic behaviour, interpersonal relationships revealed through proxemic behaviour, and environmental factors that influence proxemic behaviour. In addition, touch as a proxemic behaviour has also received elaborate attention in empirical researches on proxemic behaviour. The studies on individual differences in proxemic behaviour focus on sex differences in proxemic behaviour, age in relation to developmental aspects of personal space as well as differences in proxemic behaviour due to age differences, proxemic behavioural variations due to cultural and ethnic differences, differences in proxemic behaviour due to differences in factors, and proxemic behaviour of psychiatric populations. The studies on proxemic behaviour of interpersonal relationships focus on familiarity and liking, intimacy, arousal and interpersonal distance, interpersonal similarity, influence of proxemic behaviour on interpersonal perception, interpersonal distance and negative social experience, interpersonal task orientation, seating arrangements and interpersonal interaction, and territorial invasion of personal space. The empirical studies of environmental factors impinging on proxemic behaviour focus on distance and behaviour in shrinking/shrunken space, crowding, competitive and cooperative situations, large and small groups, influence of task and sex differences in the effect of crowding, social isolation and stress, behaviour differences among unacquainted individuals, the effect of different architectural designs on individuals, reactions to various fixed spaces, and study of prison setting. Empirical studies on touching behaviour have focused upon body accessibility, the conditions under which a person will permit another to touch him, the meanings people attach to touching and being touched, the loci of acceptable touch, etc.

The present trend in the study of proxemic behaviour is governed and guided by trends of studies mainly in psychology. Experimental investigation holds the day; naturalistic observation is kept to the level required for formulating initial hypotheses and is reluctantly used in aid of experimental investigations. However, this author finds that naturalistic observation in proxemic behaviour studies has to play a greater role than is grudgingly assigned to it by psychologically oriented studies for the following reasons. The role of experimentation in research on proxemic behaviour is also stated below:

(1) Naturalistic observation and experimental investigation are not contradictory to each other.

(2) Naturalistic observation can easily and profitably precede experimental investigation.

(3) Naturalistic observation supplies relevant and essential variables for experimentation.

(4) Naturalistic observation sets the realistic setting for experimental investigation.

(5) Naturalistic observation is adequate in many cases; cases in which the findings could be based only on intelligent observations of patterns and their networks are many.

(6) Naturalistic observation is most appropriate if the subjects are too individualistic.

(7) Experimentation clarifies the situation.

(8) Experimentation brings out the hierarchy.

(9) Experimentation brings out matter not observed in naturalistic observation.

(10) Within group, comparison is facilitated by experimental findings in a more objective manner.

(11) Dividing points/features between items observed otherwise as continuous is facilitated by experimentation.

(12) Most of the experimental investigations ignore culture and the biobasic rootedness of nonverbal behaviour.

(13) Experimentations in one system of nonverbal behaviour ignores nonverbal behaviour in other systems of nonverbal behaviour.

In other words, study of proxemic behaviour, in the nature of things, demands that both naturalistic observation and experimental investigation are employed.

In addition to the above, study of proxemic behaviour would do well if a three dimensional approach is adopted. Proxemic behaviour used for communication can be looked at from the point of view of proxemic communication in and with cultural artifacts, proxemic communication in social groups or proxemic communication predominantly governed by and for social group axioms/dicta, and proxemic communication between individuals. While the proxemic communication between individuals is also guided by social group axioms/dicta, individuals can and do relax the conditions imposed by the dicta, in their interpersonal transactions. As a result the proxemic behaviour dictated by social norms get modulated at the encounters between individuals. Proxemic communication in and with cultural artifacts also modulate the proxemic behaviour generally prescribed by social dicta in the sense that the former reflects not only the social dicta but also the ideals of the social dicta, along with varying values attached to adherence to social dicta as well as deviations from them. It provides a window for viewing what is hidden, what is intended, and what the aspirations are. It provides for the imaginary. All the above three dimensions are anchored on to the biological and environmental constraints and potentialities on the one hand for their existence, and on the other hand these dimensions

in their turn modulate the values/interpretation and exploitation of biological and environmental constraints and potentialities.

## 2.4. Cultural Artifacts and Proxemic Behaviour

Of the artifacts societies/humans have created, we devote our attention to the study of proxemic communication in and through the cultural artifacts of dance, music, theatre, sculpture and temple organization in the Indian context. A chief characteristic feature of these artifacts is one of replication of social organization and environmental factors. The replication is necessary to bridge the gap that is inevitable between artifacts and actual environment. The function of authenticity is to bridge the gap between an artifact and the actual environment, primarily. Thus, the most important communicative processes of cultural artifacts should be sought in the deliberate attempts to create distance where no distance is involved and to close the distance where some distance is involved.

Take, for instance, the use of curtain in a Tamil streetplay or in *kathakali*. It creates distance between the actors and the audience, where there is practically no distance involved. It creates distance between actors on the 'stage' when different actors are involved in different functions within the same scene. Its removal suddenly closes the gap between the two and serves the function of uniting the characters to bring a unity of purpose to the scene. Thus the device has two broad functions -- one, separating the entire artifact from the audience, creating a distance between the audience and the artifact, and second, creating distance between characters, pursuits, etc., within the scene. Classification of ragas based on spatio-temporal assignation for every one of them in



Carnatic music is another attempt to bridge the distance between different media. At the same time, the ragas are employed as symbols of the mood intended to be conjured. Where there is distance, where there is difference between actual condition and intended condition, the distance is eliminated and the intended condition is brought in through playing a raga which is appropriate for what is intended to come/occur. Temple organization is an area which fully exploits proxemic behavioural patterns. Take, for example, the placement of an elitist Hindu temple (Thirumalai, 1983) in a small town in Tamilnadu. The elitist Hindu temple is located generally in a place which is the middle of the original town, with Brahmin streets on the bank of the river, close to the temple. The other Hindu castes are generally indicated their ranking on the basis of the distance of their settlements from the temple, proximity indicating a higher rank. This neat geographic representation of castes is largely watered down these days and yet the original scheme of things can be easily retrieved. Also that geographical distance plays a great role in maintaining social distance is attested in the fact that the habitats can be divided into three kinds and placed in geographic contiguity, with distance between the three. The Brahmin hamlet is closest to the temple and is located on the river bank or near the water source. The non-Brahmin caste Hindu streets have a socio-petal distribution surrounding the temple, in an order of progressive reduction in closeness to temple, corresponding to reduction in ranking. The lowest of the social strata occupy the periphery or may occupy space outside the periphery. The distinction between major and minor deities is also well attested via their placements in the town. The non-vegetarian minor deities also find their temples placed not in the centre of the town but in its periphery. The minor

deities within an elitist temple are also governed through geographic distance depicting their social status/proximity to the presiding deity of the elitist temple. The mischievous ones among the minor deities are at a distance and require special supplication.

The proximity between the central deity of the temple and others is also easily demonstrated by their placement, at least in bronzes. The sanctity of the main idol clubbed with social distance is maintained through an organization of chambers leading on to sanctum sanctorum. A distance is maintained between the deity and the devotee through various means; one such means is that admission is prohibited to anyone, except the priest, to enter the sanctum sanctorum. And the sanctum sanctorum is approachable only through various chambers placed before it. This established distance is broken and closeness is created when the *utsav murti* is taken on a ritual procession periodically around the temple on a fixed route. God, thus, closes the distance between himself and the devotee. Note that distance is created for one purpose and that the same is closed for another purpose. Both are maintained, both coexist through the innovation of the institution of *utsav murti*. The institution of *archaka* in elitist temples, in comparison to its nonexistence or its existence with lesser functions in folk temples, coupled with the institution of worship through a language (Sanskrit) not comprehended by most devotees, is yet another device of creating distance between the deity and the devotee, which is again closed by ascribing some function to native language in worship.

The temple sculpture is another cultural artifact in which distance is deliberately created and closed. Concretization of gods and goddesses

in the form of idols is a process of distance between the concept and representation, between humans and the deities. The idols are given the form of humans and this is also a major step towards bridging the distance between the gods and humans. There is also the creation of a society of gods and goddesses and this society is governed generally by the social norms of humans. However, in order to maintain the distance between the gods and humans, certain special features are also introduced in the society of gods and goddesses. For example, the gods and goddesses can take different forms and can appear in different places simultaneously, can fly in the air on their own, and can walk on water, and on the land without their feet touching the land. The gods and goddesses are also governed through human kinship. This is another device to bridge the gap between the humans and gods. Each god or goddess is also assigned his/her own vehicle, personal transportation, and the gods and goddesses have many limbs and heads. While the distance between the gods and goddesses on the one hand and humans on the other is narrowed by adopting human social forms, the distance between the two is created by the special features listed above. Here the distance is meant for creating identities and distinctions. In addition to these physical features of idols, there are also other devices by which distance between the devotee and the gods is created as well as bridged. For example, the devotees themselves are elevated, to the status of deities and given a place of worship within the temple complex. Another feature is that some of the devotees in bronzes become a regular feature of attachment to the major deity. For example, the idol of Patanjali always has a place along with Nataraja. Likewise some Tamil Saivite human saints in their bronzes are attached to the major deity. This phenomenon is a process of bridging the distance between

the humans and the gods. However, none of these humans would be depicted with divine features attached to the idols of actual gods and goddesses. This characteristic of idols depicting humans creates and maintains the distance between the gods and the humans elevated to the status of deities. Also, there is a compression of events portrayed in a sculpture panel. For example, on the panel of Māmallapuram, one finds a combination of several features, some from the animal kingdom, some from humans, some from deities and some from natural phenomena, in a compressed form, giving a totality of the event taking place all at a time. Once this portrayal is attempted there is always compression taking place and as a result the distance between the levels gets deliberately obscured.

Another cultural artifact that creates distance as well as closeness, is the naming processes of places. For example, consider the case of Uttara Kasi and *Southern Benares*. The original Kasi is replicated in a town in Tamilnadu, called Tenkasi, meaning Southern Benares. This is an attempt to bring the sanctity of the original Benares closer home. The cultural artifact is a very common feature in India. This phenomenon acts as a unifying force. Another cultural institution relates to construction and maintenance of latrines only outside the house. The older houses with huge compounds even today have the latrines built away from the main places of residence, since keeping this facility within a residential part is considered an impure act. It is so much so that the student hostels of Annamalai University built in early 1930s did not have latrines in their main building. The toilets and the bath rooms were built away from the hostel.

Another cultural artifact is the use of distance

for purificatory processes at the time of menstrual period of women in some Tamil communities (applicable to many other Indian communities as well). The women during their menstrual period are expected to sit outside the main place of residence in traditional Brahmin households. The compound of a Brahmin household has specific space/facilities for such purposes. In case such facilities are lacking the women are asked to sit inside the house in one corner and are not allowed to do household work. In non-Brahmin Tamil homes of some communities, when the households do not have much rooming facility the women are asked to sit in a corner of the same room with a husking stick between her and the rest. The husking stick thus creates distance between her and others where there is practically no distance involved. Yet another process of creation of distance where there is no distance in reality is the institution of wearing a veil/covering the face with the *palleu* of the saree. Another cultural artifact is the distance kept between various cremation grounds of different communities reflecting the social distances/distinctions among the communities involved.

## **2.5. Social Group and Proxemic Communication**

Proxemic communication governed by social group identities is demonstrated in the influence of caste in proxemic communication. Distance and touching play a crucial role in the proxemic communication influenced by caste. While caste can be viewed as a cultural artifact as well, there is a difference between cultural artifacts of the class, consisting of items, such as dance, music, etc., and the social institution of caste. Caste manifests in behaviour and permeates all behaviour. Whereas cultural artifacts have concrete existence outside humans, caste has its existence within

humans and regulates all their behaviour.

Caste regulates the proxemic patterns between members of different castes and among members of the same caste. It also regulates proxemic patterns for various kinds of pursuits and contexts. Caste regulates proxemic patterns of geographic settlement as well. In a typical Tamil village, caste distribution and ranking is reflected also in the geographical contiguity of the habitats of individual castes. While there is a settlement called *agrahāram* for Brahmins, generally located closer to a water source, such as a river, away from the *terukkaḷ* 'streets' in which the non-Brahmin, the so-called touchable Hindu castes live, and the members of the so-called *untouchable* castes live further away from the 'streets' in another direction. Thus, a geographic distance is maintained between Brahmins, non-Brahmin touchable caste Hindus, and the so-called untouchables. As already pointed out in an earlier section, caste ranking is closely linked with geographical distribution of the castes within a village, or a small town. The ranking of a caste in terms of other castes may be judged based on the geographical distance the caste occupies from the elitist temple in the village or town. It can also be judged in terms of its distance from the water source, in particular from the river bed. Closer the caste settlement to the water source and elitist temple, higher is its ranking in the caste hierarchy.

Each individual carries his caste within him, although many may deny it. The socialization processes an individual undergoes in the Tamil society are caste-based, even though the schooling processes may regulate the exhibition of such influences. These caste-based socialization processes also inculcate in the nonschooled certain processes of adjustment and behavioural norms in interpersonal

communication, among members of different castes. These processes include both linguistic and nonverbal patterns. We argue that caste is omnipresent in all social behaviour and suggest *caste memory* as a factor guiding interpersonal and intrapersonal relationship. This caste memory is acquired through interpersonal contacts and experience. Caste memory has several consequences for the choice and partaking of food, participation in public activities, and for interpersonal interaction both at verbal and nonverbal behavioural levels.

Touch and distance play a crucial role in caste organization among Tamils. We find that a three-tier caste organization is prevalent based on distance; the habitats are organized employing distance as a deciding/manifest variable. Touch and distance also play a crucial role in regulating the behaviour of members of a caste among themselves as well as between members of different castes. While untouchability is a crime as per law, it is still practised in many parts of India. Members of the so-called touchable caste Hindu communities in many parts of India have a great aversion towards sitting and eating together with members of the so-called untouchable castes. That they have an aversion is revealed in the efforts of official agencies that aim at promoting functions in which members of different communities including the so-called untouchable communities would sit together and eat. Touching in social level does not include only direct bodily contact but also use of the same object, such as vessels used by members of both touchable and untouchable castes. Direct bodily contact as well as use of the same space and objects are prohibited. Also proximity is to be avoided; always a distance should be maintained between members of the so-called touchable and untouchable castes. The touchability/untouchability phenomenon has its

own history in Tamil society. Communities were divided as right-handed and left-handed and certain proximity and touchability codes were prescribed centuries ago. Proximity and touchability codes are also found within the interpersonal plane. Wife is to walk behind her husband; the spouses are not expected to be seen together, to be holding hands or have any physical contact in public, or in the presence of others in the family. While Brahmin castes practise untouchability towards all non-Brahmin castes, the non-Brahmin castes practise untouchability as a social phenomenon towards members of the so-called untouchable or lower castes. Again, members of the non-Brahmin castes including the so-called untouchable castes refrain from touching the members of Brahmin castes, even when necessity demands it.

Touchability is closely associated with the phenomenon of pollution. If the members of untouchable castes entered temples, pollution was assumed to have been caused. Touchability as a social institution functioned to create distance between various social groups. While untouchability as a social act is prohibited by law, creating distance between members of different castes through the phenomenon of untouchability still continues in novel ways. The phenomenon of silver cups or china is an illustration of the practice of untouchability. When guests belonging to non-Brahmin communities visit a very orthodox Brahmin household, an entirely different set of vessels in silver or china may be used to serve food or drinks. While some households may serve food or drink in the same set of vessels to both the members of their own family and the guests, some households may retain their regular vessels for their members and use a different set for the guests. In both cases, however, while the distance is bridged at one level by eating/drinking together using



similar vessels on the occasion, distance is maintained at another level in the sense that when the family members eat and drink within the family, another set of vessels is used: touchability at one level and untouchability or retention of one's way of life at another level. The use of dialects in Tamil is another clear case of creating and closing distances between social groups. There is a clear distinction between the Brahmin dialect of Tamil and the non-Brahmin dialects of Tamil. A Tamil Brahmin is capable, generally, of using both his own dialect of Tamil as well as the non-Brahmin dialect of Tamil. In his use of the non-Brahmin dialect of Tamil he closes the distance between him and the non-Brahmin, whereas the use of his own dialect enables him to maintain the distance between him and the non-Brahmin. Certain vocabulary items, phonological variables, and syntactic and semantic nuances are exploited in maintaining the distance between the two. This is almost like the silver cup phenomenon described above.

Attire, odour of perspiration and caste marks are some of the other nonverbal communication variables exploited in the social level. Whereas caste memory regulates the proxemic behaviour directly through conceptual processes, attire, odour and caste marks go to the aid of caste memory in its operation. Odour of perspiration is not a product of caste organization but is a direct consequence of incessant labour which even the members of the upper castes would acquire if they are also subjected to hard manual labour all through. Odour of perspiration generally ascribed to the so-called lower castes is accentuated also by the settlements of these lower castes being further away from the water source. Even attempts at having regular baths by them are sneered at and discouraged. Caste marks such as the Vaishna-

vite forehead marks, Brahmin's sacred thread, sacred thread worn by members of other castes all act as communicating symbols for others to regulate their behaviour towards those who wear and exhibit such marks. Attire is a clear, distinct mark of identity which also regulates the behaviour of others. The manner in which the saree is worn by a Brahmin woman in her household, and in the river while having a bath, is different from the manner in which it is worn by non-Brahmin women, in the same contexts. In several cases, however, attire and caste marks have been reduced to the function only of identity, whereas odour has a consequence directly for proxemic behaviour. Attire and caste marks when worn on certain occasions do also become a reason for proxemic behaviour. While returning from the bath in the river, Brahmin men and women generally adopt a course of distance from others so that no pollution is caused. Also for religious ceremonies as well as for morning worship inside the house, distance is maintained even between the members of the same household. In essence, proxemic behaviour on the social plane has the function of maintaining the caste organization and hierarchy. It helps the maintenance of identity as well. A proxemic behaviour at the social level of a caste is applicable not only in its transaction with members of another caste, but it may also be applicable to members of the same caste and household on certain occasions. Again, the mode of treatment by proxemic behaviour meted out by members of a particular caste towards members of another caste may be applied to it by another set of castes and/or certain classes of people, as in the case of proxemic behaviour towards recognized Acharyas. The proxemic behaviour prescribed for interactions between members of Brahmin and non-Brahmin castes is practised between the members of Brahmin castes on the one hand and the Acharyas on the

other. Note also that where prescribed proxemic behaviour has come to be questioned at the secular as well as religious levels, adherents to tradition may find an opening to retain the proxemic behaviour at some not so manifest level while adopting methods of closing the distance at other manifest levels.

## 2.6. Proxemic Communication in Interpersonal Contexts

The difference between proxemic behaviour at the social level and the proxemic behaviour at the purely interpersonal level is the potential the proxemic behaviour at the interpersonal level has for relaxation of what is prescribed as the right proxemic behaviour at the social level. Only to provide for this potential and need, perhaps the Hindu ritual codes prescribe **prāyaścittam**. Individual compulsions in interpersonal transactions have always been a source of modification in social codes prescribed by caste institutions. Caste memory does regulate nonverbal behaviour, but, as stated, compulsions of the context along with compulsions of schooling could relax what is dictated by caste memory. At the interpersonal level, proxemic behaviour is guided mostly by perceptual features including manner of speech.

Olfaction is an important guide for the use of space between individuals. It is an important means by which communication of the intended message is carried out. It is also used to signal status and power. It is exploited to identify the ranking of the individual encountered and to regulate one's own behaviour towards that individual. Three variables seem to influence the operation of olfaction in interpersonal communication. The quality of olfaction is decided upon by the distance between the individuals, strength of olfaction and the medium

by which olfaction is carried out. When individuals encounter one another they are either repelled from one another and they (or at least one of them) try to be as far away as possible from one another, or they maintain the distance they are in. If bad odour is smelt, attempts to be away from one another are instantaneous. Strength of the scent used or the strength of the scented hair oil used also indicates the finesse of the individual using the scent. Rural (and lower class?) people prefer strong scents, whereas the upper class and the educated prefer soft smelling scents, hair oil and soaps.

Olfaction is suppressed in the upper classes as well as among the educated, whereas olfaction is ignored in others. Using scents in the lower classes is not for the suppression of body odour, but is treated as yet another ornament meant for the occasion. There are scents prescribed as part of worship. For example, an essential item used in prayer/puja is frankincense and/or scented stick, which is invariably used both in marriage and death ceremonies, and in worship of deities. Note also that odour is communicative of one's own identity of professions, etc., and that there is practically no attempt at suppressing information on this count. Farmers, fishermen, domestic servants, scavengers, all have their own specific odour derived from their avocation and this odour communicates their identity and regulates the behaviour of those who encounter them, many a time creating a distance between individuals. Many a time the same odour also acts as a unifying force among members practising the same profession, thus closing the distance between members of the same group. Suppression, reduction or elimination of odour is not, however, absent. Suppression is resorted to as part of purificatory processes for an auspicious occasion, through baths, wearing

fresh washed or new clothes, etc. But using a scent is not generally visualized as a mechanism for suppression.

As investigators of olfaction as a means of nonverbal communication, we have to look for 'boundaries and whether they have been crossed or not. Everyone is surrounded by a small cloud or haze of smell, varying in size according to physical setting, emotional state, and culturally prescribed norms. The investigator must determine at what point the smell is unmistakable and whether this fits into the total proxemic posture. Usually there is little ambiguity. Most transactions occur either inside or outside these boundaries' (Hall, 1969).

Voice loudness is another interpersonal nonverbal communication variable. Voice loudness is controlled by distance, relationship between the parties involved and the situation or subject being discussed. With voice level we judge distance. We will whisper in close quarters and shout when the addressee is not at a distance. The manipulation of voice loudness is also a socially prescribed code for women, servants and inferiors. Socialization processes control the way we view voice loudness in different situations and for different purposes. Children are taught how to modulate voice loudness.

That voice loudness clearly reveals the distance involved is obvious in many cultures. That voice loudness is also perceived as a cultural trait is seen in most Indian communities. Speakers of most Indian languages have a tendency to term speakers of a language other than their own as noisy people, speaking in great volume which also includes harshness. Some language communities pride themselves in being given to the habit of speaking with voice loudness; here such loudness is related to some virtue, such as being always

happy, open and frank, etc. Within a single language community also, members of one caste may call members of another caste as noisy people. Within and across language groups, there are always occasions wherein loudness is not only allowed but also demanded. Thus, voice loudness, which is a sure variable to reveal distance involved between individuals engaged in communication with one another, is also an important nonverbal variable to communicate the mood of the speaker. While in natural contexts voice loudness is resorted to in distance, in conditions of closeness where distance is to be created between individuals, one of the individuals may resort to voice loudness. Where voice loudness is demanded in natural circumstances, distance may be closed by resorting to soft voice (or distance may be pretended to be not in existence and soft voice may be resorted to). Slow and soft voice is always related to dignity in behaviour. Also note that reduction in loudness of voice coupled with a rigidly formal disposition, sometimes reduced to mumbling, can create distance between individuals when there is no real physical distance involved. In essence, loudness in voice creates distance and softness in voice closes distance; the reversal of this phenomenon is resorted to, to create distance where there is no physical distance involved and to close distance where there is physical distance involved. At another level, combination of softness with other variables, such as a formal disposition does create distance where there is in reality no distance involved.

Use of language style also is resorted to in creating and closing distances. This is different from the voice loudness. Here use of language style means the use of certain styles in which the actual content of the message may not directly influence the creation and closing down of distances,

but the manner of speaking may reveal the distance or closeness between individuals engaged in communication. What one talks about and the manner of talking are linked with distance and situation. Joos (1962) lists five styles, each used for a different situation. They are: intimate, casual, consultative, formal and frozen. Intimate style is generally adopted when distance is closed, whereas the formal and frozen styles are resorted to, to create distance even where there is no distance in reality involved. The formal and frozen styles can be adopted even when there is actual distance involved so that further distance can be created. In Tamil, there is a clear distinction between written and colloquial Tamil. To what extent the use of one or the other decides/influences proxemic behaviour is not clear in face to face communication. However in written communication where the parties engaged in communication are not physically present simultaneously in the same place, use of the colloquial style communicates several types of information: the background of the correspondents as regards education, status of the correspondents, and the level of intimacy between the correspondents. In the last case, there is some consequence for proxemic behaviour. The distance in reality is closed between the correspondents by a resort to colloquial style in the last case. Likewise adopting a very formal and frozen style of presenting matter in writing creates distance between the correspondents.

We deal with eye and its use in nonverbal communication in a separate chapter. We shall see briefly here only those salient features of vision that have a direct bearing on proxemic behaviour between individuals. Vision is a primary means of judging distance in interpersonal communication. 'How the eye is used is a function of one's culture. The culture specifies at what,

at whom and how one looks as well as the amount of communication that takes place via the eye'. There are at least three strategies adopted in creating and closing distance using the vision medium. Even when a person is close and is right before one's vision, one could pretend not to have seen the individual and carry on one's duties and/or proceed further away from that individual. This shutting up of one's eyes, revealed in not recognizing the individual encountered, is a deliberate act of creating distance. Likewise even when an individual is further away and is in a crowd, one may recognize the individual and manifestly exhibit this recognition of the individual. This is closing the distance gap where there is in reality physical distance involved. A politician or a *swamiji* or any public figure may see the people around with a survey look keeping his palms folded to greet the people to bridge the distance between him and the people. The distance between him and the people is due not because of real space but because of his inability to mingle with people for various reasons. Even when he is close to the people in physical distance, his status creates a distance between him and the people, and this distance is sought to be bridged by the survey look, and other accompanying devices. In the interpersonal communication, a proper blend of looking at the individual and looking away from the individual is demanded. Turning away for most of the time from the individual, who is before one, in face to communication, would mean creating distance between the individuals engaged in communication. There is yet another interesting phenomenon which clearly reveals the dynamics of vision in seeing things far away as close and in treating things which are close as things far away or nonexistent even. One recognizes an individual or object at a distance and rushes to the individual or object



recognized, in the process tripping over things or stepping on individuals in the way. What is perceived and recognized at a distance comes closer to the individual than what is actually close to the individual in reality -- the individual does not see the object he trips over or the individual he steps on, although the individual or the object may be in reality very much closer to him than the object/individual recognized further away.

Hall (1963) has included under thermal factors mainly heat gain and loss which influence the structuring of the close distances. While the sensing of heat from another body can result in a movement either towards or away from the source, the cultural factors in Indian societies do permit such closeness only in crowded places and transport vehicles. Both males and females always try to avoid such heat flow from one to another, if space could be created between those who are close to one another. Where no space could be created, there is always an attempt to adjust the position even while maintaining the same distance in space. Perspiration is another factor that is caused quite frequently in Indian contexts when individuals are close to one another in crowded places including transport vehicles. The behaviour noted above, namely, changing position/shifting position while retaining the same amount of space between the individuals is often resorted to. Hence, the communicative potential of thermal factors is limited in Indian contexts.

Touching as a proxemic behaviour in social groups is already discussed. In interpersonal communication, touching as a proxemic behaviour differs from sex to sex. Generally speaking, heterosexual touch is prohibited among strangers. And among those related and/or familiar with one another

also, heterosexual touching behaviour is admissible only among certain categories of kinship under certain age groups and across certain age groups. Even among members of the same sex, touching behaviour is governed by social status, attire, age, and familiarity. Touching is generally resorted to for calling the attention of the individual who is beckoned through touch. It is also resorted to as a form of worship and of begging the pardon when one steps on the other unawares. Touching is also employed for comforting, to show the closeness of relationship between individuals. One also pushes the other forcefully to make way for oneself. While bodily contact in the crowd is tolerated, the general tendency is towards avoidance of touching behaviour between both members of the same sex and across sexes. Thus touching as a nonverbal mode of communication has certain limitations and is restricted to certain specified spheres only in the general Indian context.

At the interpersonal level, touching behaviour appears to have the following consequences: (i) Touching, in a positive and permissible sense, appears to be restricted to communication in family setting; (ii) Touching in the public setting among private citizens, not familiar with one another, is generally associated with offence, and is considered an act to be avoided; and (iii) Touching behaviour in the public is also considered in a positive view when the touching is committed by and/or oriented towards public figures, generally the venerable individuals of religious and/or secular pursuits, for whom both the private and public spheres of activity merge together.

The communicational contexts, in Tamil society, may be broadly classified into two types, family and extended family setting, and public places (Thirumalai, 1983). While touching as a nonverbal

behaviour in public setting, as already pointed out, is to be generally avoided, and is tolerated because of necessities and compulsions, touching as a nonverbal communication behaviour is regulated in certain ways within the family and extended family setting. The regulation is generally based on the placement of the individual on the marital line, actual and potential, or on the non-marital line (Thirumalai, 1983). The kinship line from which the speaker (communicator), his own brothers and sisters have or can have or could have had their spouses is viewed as the marital line. The relatives or potential relatives with whom and/or with whose families exchange of brides and grooms is possible are viewed as belonging to the marital line. Note that marriage is permissible only within the caste and that marriage takes place generally between members of families already related to one another. Members of the same caste, but not related to one another, are placed on the marital or non-marital line through intermediary families. Touching as a nonverbal communicative behaviour is permissible across sexes of members of non-marital line only. This touching behaviour is also generally avoided among adults. Thus, touching as a communicative behaviour is allowed neither in public places setting nor in family setting, across sexes, generally speaking. As already referred to, normal touching by hand/finger while exchanging things, in talking, etc., is admissible between spouses, but touching behaviour, such as embrace, kissing, etc., are in the realm of taboo both in the family setting and public places setting where others are present. The communicative status of touching, thus, is to be explored in the purely intimate personal plane, both among the members of the same sex and across sexes. Touching, rather avoidance of it as a communicative behaviour, is to be seen at the plane of societally prescribed behaviour, more as behaviour guided and regulated

by caste institution.

A clear case of touching as a communicative behaviour in its ontogenetic base is seen in the use of the same by mothers in Tamil society. The alienation process between mother and offspring as biological organisms commences with the progressive lessening and loss of physical contact between the two, with emergence of language playing a more important link in the social relationship between the two.

The just born child does not respond physically to the utterances of the mother in the initial stages. The physical contact between the two carries a greater load of communication between them. The utterances of the mother are more or less one way communication at least for a brief period. Soon, even at the babbling stage, mother's utterances come to have a communicative role and content. There is syncretic understanding of the content and paralinguistic features; verbal utterances come to communicate with children. The functions of mother's utterances are manifold, but in essence they appear to have a catalytic, instigating and supporting role for physical, mental, social and linguistic maturation. One of the important factors that not only influence the speed and manner of language acquisition but also the content and result of socialization processes is the linguistic and nonlinguistic (nonverbal) behaviour of mother. The influence is better understood by a study of mother's endearments and other utterances, not for their role in the emergence of linguistic structures but for their role in the nonlinguistic behaviour (including nonverbal behaviour) of child in current as well as latter day performance.

Mother's endearments and related utterances have to be studied under three periods: the first

period in which the child has no or very little language; the second period in which the child engages herself in the acquisition of language and a syncretic understanding of both linguistic and nonlinguistic behaviour; and the third behaviour in which the child has mastered language and has some explicit but not complete understanding of the environment. The first period is characterized by four elements on the part of the mother: (i) the frequent physical contact leading to caressing and fondling, (ii) along with caressing and fondling, utterance of single syllables and combination of syllables with no apparent relationship to words in language, and in repetitive succession, (iii) vocative utterances with no apparent vocative function, and (iv) sentences indicating/identifying the objects and the events around (most of these being hypocrisies). All these utterances function as endearments and all these generally accompany or are accompanied by physical contact between mother and child. The second period is characterized by the processes which should be considered an extension of the fourth characteristic of the first period. Still vocative expressions with no apparent vocative function are employed. The third period marks the less or even the loss of physical content with mother and this comes to be regarded as the proper behaviour in later life -- in intense moments of agony and suffering only, one regains this tender touch and not otherwise. The all pervasive endearment function of physical contact in early childhood is slowly replaced by linguistic utterances, and physical contact takes on a specialized function in Tamil society. The alienation process between mother and offspring as biological organisms commences with the progressive lessening and loss of physical contact between the two, with language coming to play a more important link in the social relationship between the two.

Touch as a deliberate medium of communication is employed in certain commercial activities also. In these contexts, touch of fingers of individuals is used as a secret code of communication. For example, the brokers in the cattle fairs in Tamilnadu negotiate the prices of various heads of cattle using this secret code.

Yet another variable is the distance normally maintained and/or appropriate, for a transaction, between individuals. Hall (1963) identifies the following positions in this regard: (i) within body contact distance, (ii) just outside body contact distance, (iii) within easy touching distance with only forearm extended, (iv) just outside forearm distance (elbow room), within touching or grasping distance with arms fully extended, (v) just outside this distance, (vi) within reaching distance, and (vii) just outside reaching distance. In the Indian context, the distance maintained between two individuals in public places setting clearly reveals the status and extent of intimacy between the individuals. There is a clearcut difference in the use of postures and positions adopted by individuals belonging to rural and urban settings. While the last three positions are generally found and expected in the rural areas for public places setting in transactions between different sexes, positions just outside body contact distance, within easy touching distance with only forearm extended, and just outside forearm distance (elbow room), within touching or grasping distance with arms fully extended are all allowed, with varying communicative intent in the urban setting. Status and intimacy act in opposite directions as regards distance, generally speaking. This is valid both in rural and urban contexts, as regards public places setting. A position within body contact distance certainly reveals a greater intimacy between the individuals; the position just outside

body contact distance also reveals closer intimacy between individuals if such a position is not warranted by the task on hand, such as looking into a document or object closely; the position within easy touching distance with only forearm extended shows the familiarity that exists between individuals while at the same time showing the narrowing status difference between these individuals; the position just outside the forearm distance also reveals familiarity and closeness in work; the positions within reaching distance and just outside reaching distance indicate that the relationship involved is generally of a formal nature and that there is indeed much status difference between the individuals involved in the communicative act. Note that the distance maintained is a consequence of underlying relationships and purpose of transactions. Also it is influenced by seating arrangements, whether one person is sitting and another standing, and the environment (open space, games, office, etc.). In other words, while the distance maintained between two individuals in the communicative act may communicate on its own, certain values held between the individuals, the distance itself could be dictated by necessities which in their turn may obliterate the values.

Some of the other features of nonverbal communication through proxemic behaviour at the interpersonal level are as follows:

(1) Although the space is more sociofugal than sociopetal in Tamil and many other Indian societies, there are restraints imposed by caste institution. These restraints imposed by the caste institution are found, as situation and sex bound behaviour, not only in the transactions between members of different castes but also among the members of the same caste.

(2) In America, as soon as a person stops or is seated

in a public place, there balloons around him a small sphere of privacy which is considered inviolate. The size of the sphere varies with the degree of crowding, the age, sex and the importance of the person, as well as the general surroundings. For the Arab, there is no such thing as an intrusion in public. Public means public', (Hall, 1969). Likewise in India also, public means public, if this constraint is not modulated by (the known) influence/status one bears and is able to exhibit with impunity and support. If there is no supporting structure behind the individual, the individual will have to put up with the "violation" of his space. In other words, public space means really public and is to be shared by all. There is also the phenomenon of no one taking the responsibility for the disorder (of various things) found in public; since it is a public place, it is for the institutions of governance to assume responsibility for removal of disorder/for the betterment of conditions. Public means that it does not belong to any one in particular and hence one could treat it the way one likes, so long as one is not caught red-handed.

(3) Females require less personal space than men, with members of their own sex. They deliberately create greater distance between them and members of the opposite sex purely as a social code of behavioural norms between sexes, in contrast to men who create deliberate distance between them and members of their own sex on grounds such as status and power.

(4) Personal space is expected to be increased by individuals as their age increases.

(5) There is a direct relationship between age and distance when we compare children, adolescents, and adults conversing in natural settings.

(6) Touching while conversing is generally frowned upon among adults of both the sexes.

(7) Perception of real, physical space, its patterns of use, consequences of failures to appreciate the dimensions



of space appropriately, assessment of space in terms of depth of distance between the physical position one occupies and the ground below or above and perception of the real spatial distance are matters of ontogeny. There appears to be a hierarchy in the acquisition of apperception processes of real space. The transfer of these perceptual processes from real space experience to its use in interpersonal, societal, and cultural artifacts levels of communication is a slow process. It is through imitation of adult behaviour, instruction given by adults and by personal experience that the socialization processes instil in individuals the appropriate proxemic behaviour.

(8) Touching behaviour is found among children more commonly if the children belong to lower economic classes.

(9) Touching behaviour is found among children more commonly if the children involved belong to same age group and profess familiarity and/or intimacy.

(10) Females have more physical contact on different areas of the body among themselves. Males do not touch one another as often as the females do.

(11) Touching behaviour could differ from one individual to another and thus could be related to personality factors.

(12) Several categories of touching are found in Tamil and several other Indian societies. (a) Use of touch on women by males is treated as an impersonal act in certain professional contexts as during a physician's examination. The male bangle seller, salesmen of shoes and jeweller for certain ornaments also come under the same category. However, while the male physician is allowed to touch all parts of the female body, even an inadvertent touch of intimate parts of the female body by a male bangle seller or salesman of shoes is considered a violation of personal space. (b) Touches, such as handshakes, are modern social acts, (where physical contact may occur on a very restricted socially prescribed level between members of different sexes). Touching the feet and touching the forearms come under this category. Touching

is brief and is intended to communicate reverence, submission, humility, in essence, the inferior status of the individual who touches the feet or forearm. Also the elders/priests/gurus are allowed to touch the head of the worshippers to signify their giving blessings. The touching behaviour in this category is a sure sign of status of individuals involved. (c) Beyond these two categories is the category of touching for calling the attention of the individual who is being addressed. This is generally resorted to among members of the same group and if there is wide disparity in age between members of different sexes. (d) Another category of touching has something to do with the personality of individuals. Some are given to touching behaviour when they engage themselves in conversation. This is generally frowned upon. The function of this touch is to keep the addressed attentive to what the speaker says. It also carries the value of familiarity and/or intimacy. Note that in all the above touching behaviour, touching is carried out by the fingers and palm, generally of the right hand. Touching by other parts of the body is not admissible. In extreme contempt or extreme intimacy, touching by toes is resorted to for all the above functions. (e) The touches for sexual arousal are many, varied, intense and somewhat idiosyncratic among partners. (f) Touch on cheek to show the affection one has for another. This is usually done between opposite sexes; also among the members of the female sex.

(13) Postural relaxation denotes status or power in a relationship.

(14) A person having a more positive attitude toward another does not assume a posture of relaxation while in conversation with another.

(15) Communication of respect and of positive attitude exhibits some similarity in the nonverbal cues of proxemic behaviour.

(16) Communication of liking is more by variations in immediacy, whereas the communication of respect is both by variations in immediacy and relaxation.

(17) Immediacy toward an addressee is greater when one is truthful than deceitful.

(18) Liking is inferred through immediacy, particularly when a communicator does not, or cannot, express his positive-negative emotions in the more readily recognized verbalizations or facial movements.

(19) Immediate postures and positions are associated with greater liking.

(20) Violation of distance limits elicits negative feelings. Violation of implicit norms regarding permissible physical closeness generally leads to subsequent avoidance of the communicator.

(21) A forward lean conveys greater liking whereas a backward lean or turning away shows a more negative attitude. For women, forward leaning towards other men is generally associated with intimacy between them.

(22) Arrogance, high status and slight dislike are associated with postures such as extending legs and hands, yawning and unresponsiveness to others.

(23) The body orientation of communicators with or without the distances between them, is an important variable for the communication of status. For example, the inferiors are expected to assume not an erect posture but one of bending the body before the superiors.

(24) People of equal status sit closer to one another than do people of unequal status.

(25) Since the Tamil culture does not have preference for physical closeness, a greater preference for more eye contact is not found between the superior and the inferior. However, availability of the individual in proximity to the communicator is always preferred -- just being around is demanded for status purposes. Only infrequent eye contact is maintained, since infrequent eye contact reveals the higher status of the communicator (and/or his arrogance).

(26) Body relaxation, such as the side ways lean or

reclining angle of a seated communicator, is a more prominent indicator of addressee status.

(27) Well defined movements (for example, the degree to which a person bows) may be an important variable in communicating status differences. Some will not lift their hands, fold them and greet others while others lift their hands, fold them and greet. Some will raise their hand and keep their palms in a blessing posture when greeted with folded hands. Some will only nod recognition when greeted with folded hands. Some will even rush by without acknowledging the greeting -- all revealing status (and/or arrogance).

(28) Body orientation or the degree to which a communicator's shoulders and legs are turned in the direction of, rather away from, his addressee, can also serve as a measure of his status or of his liking of the addressee.

(29) Distance and forward lean cues when used for indicating status appear to be similar in significance. The furniture in a room or hall may be fixed but a person can still decrease or increase his distance from another by assuming either a reclining or a forward leaning position. Even when he has a choice about where to sit, a communicator can lean forward or recline to emphasize his desire to be closer or farther away from another. Thus, touching, distance, and forward lean are easily related conceptually as variations in the degree of physical proximity between communicator and addressee (Mehrabian, 1972).

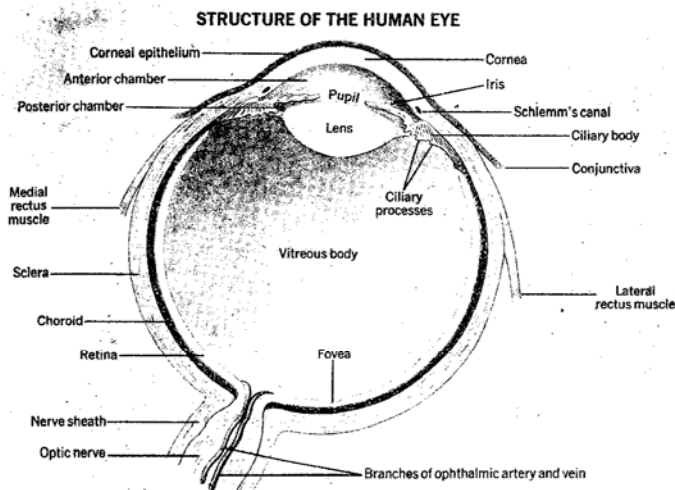
(30) There are infrequent social situations involving threat or even bizarre invasions of privacy (that is, high degrees of immediacy with unfamiliar persons) in which the relationships are considerably more complex. Increasing immediacy in a threatening relationship tends to reverse the significance of proxemic conditions.

## CHAPTER 3

### EYE AND FACE

#### 3.1. Structure and Function of Human Eye

The eye is a very important organ by the use of which we acquire knowledge about our environment. The objects around us reflect and/or emit light in our environment and with the help of our eyes we recreate the world around us using this light. The human eye is, indeed, an integral part and an outgrowth of our forebrain. The following diagram gives an outline of the anatomical structure of human eye.



The light-sensitive layer of the human eye is found deeper in the body. Light reaches this layer through a transparent cornea. Retina receives the light and converts it into chemical energy. The nerves are activated by the chemical energy and they conduct the messages received to the higher regions of the brain. Retina is an outgrowth of the forebrain and has a very complex nervous structure. There are four main layers involved in the conduct of messages received. The pigment epithelium has the function of secreting aqueous humour. Beneath the epithelium is the layer of rods and cones. These are the light sensitive cells. The layer of neurons, that is, nerve cells, receive the changes induced in the rods and cones by light. The layer of neurons consists of bipolar cells, similar to the sensory neurons that carry messages from the touch and heat receptors of the skin and transmit them to the cells of the spinal cord or the medulla. The transmission process is the same as in other parts of the nervous system. The messages are initiated in one element and are transmitted or relayed to others via synapses. As we all know, medulla is the part of the brain that is a continuation of the spinal cord. The bipolar cells are connected with the innermost layer of neurons, namely, the ganglion cells. The transmitted messages are carried out of the eye through the optic nerve fibres. The optic nerve is a central tract, not simply a nerve. It connects two regions of the nervous system, namely, the layer of bipolar cells, and the cells of the lateral geniculate body. The geniculate body is, indeed, a visual relay station in the rear portion of the forebrain. Some of the optic nerve fibres separate from the mainstream and reach the mid brain centre, called the pretectal nucleus. This nucleus is a relay centre for pupillary responses to light.

The retina is composed of three different areas: the fovea, the macula and the peripheral region. The fovea is in the centre of the retina. It is, indeed, a small circular pit, where light has an almost unrestricted passage to the light-sensitive cells. This part of the retina is employed for accurate vision, enabling individuals to see sharply very, very small objects as well. The eyes are directed towards the objects in such a way that their images fall in this restricted region for accurate vision. Macula surrounds fovea. Macula is an oval, yellow body of colour sensitive cells. The macular vision is not as clear and sharp as foveal vision, but much clearer and sharper than the peripheral vision. Macula vision is employed for reading and similar activities. The vision in the peripheral region is not sharp and clear, but perception of movements is easily carried out. Movement is exaggerated in the peripheral vision. The vision is coarse. Strait edges, and alternate black and white bands are noticed in this region. The optical system produces an inverted image of the visual field on the retina and the system behaves as a convex lens. The eyes are not stationary; they are stationary just for a fraction of a second. The eye movements may be made under voluntary control or as reflexes. Most of the actual movements of the eyes are carried out without ourselves being aware of such movements. These movements are in response to movements of the head or the rest of the body, and reflex responses. Since only fovea, which is a small portion of the retina, is generally employed for distinct and accurate vision, the muscles that carry out adjustable movements for accurate vision are under voluntary control. The eye movements are of three types, namely, the irregular movements of a very high frequent nature, flicks and slow irregular drifts. All the three movements are essential for an image to be registered in the

central nervous system. In other words, the non-stationary nature of human eye is conditioned/governed by the underlying neurological structure of human eye. What is most important for us is to remember that this nonstationary nature of human eye helps identify objects as stationary and captures the movement of objects.

The aperture in the iris, pupil, restricts the quantum of light entering the eye. There is light reflex in the pupil. Also dilation of pupil occurs as a result of strong physical stimuli. Dilation is generally associated with fear and pain. Researches indicate that the dilation of the pupil may be involved also in other psychically induced acts.

The foveal look is the look of attention and pointed focus, one of seriousness and thoughtful look in terms of nonverbal communication in many societies. Attentiveness is measured or identified and associated with looks involving fovea. The looks involving macula are generally taken for the looks of wonder, astonishment and of anger; this is also associated with wakefulness. The macula look is the look of wide eyes. The employment of peripheral regions of the eyes signifies that the look is one of a secretive nature, performed stealthily and/or shared between individuals in a fleeting moment. It is also a look intended to take stock of the situation and to make secretive assessments. Further investigation in these lines will benefit from a study of the eye in art and sculpture.

A few evolutionary facts as regards human eye are in order just to illustrate the importance of the functions of eyes in human communication. Vision was the latest sense to evolve among the species. Hall (1969) suggests that there is a general



relationship between the evolutionary age of the receptor system (olfaction, hearing, smell, touch and vision) and the amount and quality of information each of the receptor systems conveys to the central nervous system. There is a parallel here between the spoken and written forms of language. Spoken language was there before written language, that is, written language is the last to evolve, but it has greater sweep than the spoken word. Of the components of eye, the fovea was the most recently developed part in the evolution of eye. It is found in birds and in anthropoid apes. Clarity of vision as well as reality of vision in the sense of ability to identify sharply the contours and colours, thus, is an ability acquired very late in the evolutionary process of eye. As already pointed out, purposive, serious and thoughtful looks, looks of deliberations, are associated with the quality of looks facilitated by fovea, in nonverbal communication contexts. There appears to be a hierarchy between the peripheral, macular and foveal visions, which ultimately came to be associated with/assigned differential functions both in anatomically controlled performance and socially guided performance.

The living organisms reveal and exhibit different types of "eyes". Some "eyes" gather and give only information that light is present or absent. The "eyes" of some other organisms gather and give information as to the direction from which light is coming. They may also indicate the relative intensities of light from different directions. The "eyes" of some organisms may form images of objects "seen" and give information about the shape of objects. The eyes of some organisms, in addition, give information as to how far away the object is, how fast it is moving and what colours it emits or reflects. Also note that the "eyes" of some organisms are so developed that

they specialize, among various features, on one particular feature and excel all other organisms in that particular feature. 'It seems nearly impossible to think of a practical means of photoreception that has not appeared in one group or another, or in more than one. And yet the theoretical best or the perfect eye has never been achieved. All fall decidedly short of the ability to gather all the information that light can convey' (Hall, 1969).

Just as there is variety in the quality of information as regards light received and consequently the images of objects conveyed, there is also variety found among the organisms in the part of the body used as "eye". In the organisms which do not have the differentiation of cell and organ, which have only a body undivided into cells, the body as a whole may act as the "eye". In some a light sensitive spot in the body may have been developed. In some of these single-celled organisms, there may even be lense-like refractive sensitive spot. In the multicelled organisms, light sensitive cells may be scattered all over; the cells may be localized in a spot as well. The "eye" varies in size, number, shape and position -- flat plates, groves, basins, or bubblelike vesicles. These "eyes" may be turned towards the incoming light, away from it or be at an angle to it. The number of light sensitive cells, the layers of these cells and the quality of functions performed by these cells may also vary greatly. These may or may not be accompanied by light concentrating cells. Also similar parts of the apparatus may arise in different ways in different groups. The image forming eyes of several organisms including humans are also of different types. Image forming eyes gather information about incoming light and also about the objects from which the light comes. Image forming eyes are

found in animals with great anatomical complexity. Image formation requires highly differentiated parts as well as complicated activity. Furthermore, for image formation to proceed smoothly and effectively and to be of any use to an organism, the organism needs to have matching or near matching complexity of other functional parts as well. Structural level of the organism and its way of life seem to have determined the emergence and quality of image formation.

The image forming eyes also are of different types, using different optical principles: lens, pinhole, and multiple tubes. Some examples are the use of lens in humans, pinhole in the chambered nautilus and the multiple tubes in flies. It is also possible that the concave reflector optical facility may have been used in some species extinct now. Lenses can gather light and form images but lenses might have started with the function of gathering light only.

The importance of vision for gathering, processing and expressing information cannot be exaggerated. Firstly, the richness of the optic nerve in terms of the number of neurons it contains is a sure indication of the importance the vision is given in the scheme of things. The optic nerve contains several times as many neurons as the cochlear nerve. Also more information is gathered via vision than via other senses. However, note that vision does not merely consist in "seeing" but in understanding and interpretation. Seeing, understanding and interpretation involve not merely the process of seeing via the physical eye but also a linkage between other sense organs on the one hand and the socially motivated information on the other. In fact, the retinal images are converted into images of world, governed and modulated by information from other senses

as well as social and cultural norms and interpersonal necessities of communication. There can be, indeed, a lot of distinction between the retinal image and what one makes out of this retinal image in real world communicative contexts so much so that the real world image could even negate and fail to see, and recognize the existence of the image as provided by retina.

In humans, apart from the biological functions, the eye performs several physical and social functions as well. The eye identifies universal physical perspectives of the terrain. It is inextricably involved in all communication processes at all levels. It gathers information, conveys information, communicates information and also interprets the information. In the context of Sapir--Whorf hypothesis, it becomes a tool for the use of language as well. Man identifies men and materials around him, near and far, with the help of his eyes. He is able to move around, avoid obstacles and danger, and he negotiates different sorts of terrain with the help of his eyes. He is able to design and use tools, make displays and receive information as regards emotions, etc., with the help of his eyes. His eyes *gather* as well as *convey* information. Just as eyes convey information at the interpersonal level, they convey information at the social and cultural levels also. The eyes are regulated in their operations by social norms and language. As Hall (1969) points out, man learns while he sees and what he learns influences what he sees. This makes for greater adaptability and enables him to exploit past experience.

### 3.2. Eye and Religion

Communication via eye plays a very crucial role in ritual and other religious/mystic experiences. In the Hindu pantheon of gods, Siva is endowed

with three eyes, and Indra has eyes all over his body. While the provision in the former signifies power, the provision in the latter signifies knowledge of everything around. Vishnu's eyes are half-closed in the sleeping posture but they are wide awake within, aware of and regulating every object and phenomenon in all the worlds. Eyes play crucial role in the worship of folk deities as well. In essence, study of the functions of eye in religious and mystic practices gives us an insight into the role eye plays in nonverbal communication in the secular, social, cultural and interpersonal levels also. This is so because, at least in Hindu religious practices, one notices the replication of behaviour found in secular social levels. Study of nonverbal communication modes via eye in the religious practices also provides us with explanations for certain nonverbal behaviour activities in the secular social levels. Furthermore study of nonverbal behaviour in religious practices, insofar as ancient and recorded religions are concerned, becomes a clear illustration of nonverbal behaviour studies initiated by and based on literary and other texts.

An excellent study of role and function of eye in religious practices is the one by Gonda (1969). This study is text-based and presents many insights not only into the practices recorded in the Vedas, but also into the nonverbal communication practices prescribed in the Vedas and generally practised by priests and others over thousands of years. Many practices continue even today at the religious level, while several others have been absorbed into conduct in the secular social realm. Gonda's analysis covers a large number of texts, not included or treated in any chronological order; the analysis notes down the practices, interprets the words, phrases and sentences involved in the framework of contexts of such words, phrases

and sentences, and brings out a long list of activities that revolved around eye and gaze. A world view of the ancient man in India as found in the Vedas vis-a-vis nonverbal behaviour via eye and gaze is the result. Thus, the purpose of text-based analysis of nonverbal behaviour is to interpret the texts correctly on the one hand and on the other to cull out information to build up a coherent picture of the world view then present. In order to achieve this purpose, Gonda takes note of information as regards the use of other senses as well.

Gonda's study finds that, in ancient India, the language of the eyes must have been more advanced -- eye as a communicative medium is referred to in many poems and other works of literary art. Expression of emotion by the eyes attracts special notices in dramatic works also. At the religious level too eyes are seen as 'a means of expressing feelings, of imposing silence, of signifying content or satisfaction, of expressing will, love or reverence, a means also of participating in the essence and nature of the person or object looked at'. Eye -- its glance, gaze, any meaningful contact by means of eye -- plays a role in different rites of Vedic religion. The eye, here, serves a variety of purposes. The texts prescribe various kinds of significance. The significance of types of looks was understood and special value was attached to correct performance.

The act of seeing is regarded as a sign of life. Eye power represents the power of the whole person. Vedic texts reveal that ancient Indians assumed the existence of a relation between the form of the eye and a man's character. A blood-red eye signifies evil and is characteristic of angry and wicked people, barbarians, demons and awesome gods. A wide eye may point to a concentration

of vitality and wakefulness. Fixation of eyes is often feared. Also the glances of heavy souled people or mighty men who have the power to affect others injuriously.

Vedic rites reveal that a conscious, directed look is an obligatory preliminary of mental contact and psychical process. In most Indian societies people address each other looking at one another. The man in need looks up at another to obtain a favour from him or to enter into a friendly relation with him. This usage must have been in existence for very long and has been adopted in ritual attempts to achieve a similar purpose. In the ritual sphere keeping the eyes fixed upon a person means more than politeness. It serves to transfer the powerful purport of a text to the person who is aimed at by the person reciting it. The effect of a destructive act in the ritual sphere is enhanced when it is accompanied by a look directed towards the object which must be struck.

A look is consciously regarded as a form of contact. This is clear from the combination of "looking" and "touching". Casting one's eyes upon a person and touching him are regarded as related activities. The equivalence of the sight of a thing or event and other modes of direct contact is suggested in the Vedas. The texts appear to treat the fact of looking at an object as a means of entering into contact with the properties of that object or with the powers or conceptions which that object stands for. Accordingly, from the point of view of Vedas, no essential difference between looking and touching seems to be recognized (note that this approach is found in texts of many other religions as well). Looking is indeed regarded as practically identical to touch and grasping. Prajāpati, the lord of

offspring, is considered to be able to impregnate women by his mere look.

Next, a combination of look and an appropriate prescribed *mantra* achieves a definite effect, according to Vedic religious practices. In the performance of marriage rites, some authorities ask the bridegroom to make the bride look at the pole star (*dhruva*), the star Arundhati and the seven seers. While looking at them, the bride is required to address them in the following manner. "You are *dhruva*, firm, immovable, constant, steadfast and the pole star. Let me be firm in the house of my husband". For Arundhati, the bride is required to say "May I be held fast by my husband". The fixed regard helps to transfer part of the power, which is on the strength of the names believed to be inherent in these celestial bodies, to the young woman who is speaking.

The deliberate look cast in a ritual context has several functions. A major function of looking in a Vedic rite is its replication role. A look in a rite may be a replica of mythical event and thus becomes a remembrancer in Steiner's sense (Steiner, 1972). In searching for Agni one must look at the lump of clay. This lump of clay is something which is used for making fire pans through the hollow part of an ant-hill. The ant-hill is identified with the earth. Earth signifies all the worlds. And gods searched for Agni in all the worlds. Thus, there is a chain of remembrances and at the end of all abstraction is the original mythological event. In addition to what has been listed above, a deliberate look cast in a ritual context can bring to life in the minds of the performers of rites the original mythological context and shower on the performers the attendant benefits of the original mythological context. The remembrance is initiated by the deliberately



cast look. By looking intentionally at an object which a god had, in mythological times, seen or regarded first, one becomes able to repeat a divine act of power: The man who looks at the sacrificial butter knowing Indra's exemplary act will prosper and conquer his enemies.

Vedic texts suggest that looking attentively or meaningfully is not only a physical but also a psychical process. A close association between mind and eye is revealed in the observations in Vedic texts. At the same time, the texts also recognize the difference between mere physical sight and understanding with the mind. The combination of eye and ear is also emphasized. What is important is the suggestion that a gaze on an object accompanied by a formula could result in the object acquiring that quality. Note also that the close relation between the directed looks and formulae may lead to their interchangeability.

The ritual texts prescribe a conscious and directed look so as to enable the spectator to derive some advantage from looking on a mighty being or event, 'to participate in its nature or essence, to be purified or raised to a higher level of existence by being vis-a-vis with such a man or deity or by witnessing such an event'. Belief in the beneficial results of visual contact has led to a variety of ritual practices. One such practice is the ritual instruction to cast a glance on the sacrificial butter. Religious instruction and initiation are also done by the eye contact. In Saiva Siddhanta, the guru liberates his disciples from the soul's delusion controlling the discipline by his eye contact with the disciple.

*Darśan* (sight) is a very important institution -- *darśana* of the image of god has the purificatory and sanctifying power. *Darśana* of a holy man or an

eminent person has the potential to lead one to participate in the high qualities of the exalted personage. Not only the man but also objects belonging to him could be objects of worship by darṣana. Even if one does not participate in all the steps of worship performed in a temple, darṣana of the deity, sight of the deity, is more than adequate to have a salutary effect on the devotee. Darṣana is to be restricted to only worthy persons. Thus, there is the obligation to place a screen before the image of Viṣṇu so that unworthy persons may not see the worship while it is performed.

Visual restriction is found in other spheres of religious import as well. The men of high rank should not be seen eating or drinking by those in the lower social scale. There is fear of the evil eye; the eyes of those in the lower social scale would pollute the meal of persons of high rank. It is also prescribed that objects of value should be protected against the envious or inimical looks of the evil-eyed one. The evil eye could not only be envious but also angry or furious, giving offensive meaningful look. Some specified definite persons can cause injurious effects by their look, even without themselves being aware of the effects. In a similar manner, the look of a king or some other mighty being will bring esteem and be considered a token of favour. Such looks also counteract evil, danger and injustice.

Looking into a direction, looking up and looking at are all common in the rites. Looking into a direction is a means of coming into contact with the powers residing there. Men believe in turning to gods or other beings to seek help in straitened circumstances. This implies looking at the gods. To look up is another form of bestowing respect of those looked upon. Likewise the gods are beseeched by the devotees to look down upon

them from above to bestow blessings by their glances. Indra is expected to bestow his benefits upon the devotees by directing a benign look towards them. We obtain every good thing in life as a consequence of Lakshmi's glance. It is easy for us to obtain health, strength, happiness, etc., if Lakshmi directs her gaze towards us. The glance or gaze of a malevolent god or goddess creates all kinds of obstacles in our career.

Brahma has four heads each looking in different directions. He is all seeing that way. Gods and men of divinity are believed to possess an extraordinary potent visual organ. The super normal eyes help gods and gifted men to have foresight, and uncommon and exceptional experiences. These eyes inspire, excite and bring out the thought which takes the shape of hymns or formulas of great potency. The demons also have extraordinary keen sight. The eyes of the gods keep watch over us and guard us against all evil. Agni is called the eye of gods and men and is considered the first divine power. This pre-eminent place assigned to Agni is in consonance with the guiding function of the eye in the body.

### **3.3. Eye and Nonverbal Communication : Literature**

The eye conveys nonverbal information and receives and interprets the same. This process, as already pointed out, has several levels: the level of anatomical facilitation and constraints, the physical perspectives more or less universal (Gibson, 1950) and seen through the human eye, the social, cultural and linguistic regulation of the process of seeing by the eye, and the interpersonal norms and interpretation of nonverbal communication through the eye. Literature, a creation of man's mind and civilization, gives us excellent descriptions of nonverbal behaviour

and to this mine we have already referred. We understand through literature how we all see in interactions. In literature we find that all the aspects of the human eye are dealt with. For example, *Tirukkural*, a Tamil poetic work of early Christian era, dealing with, broadly speaking, *dharma*, economics, love and married life, often makes references to the information conveyed by the human eye under various contexts. It makes references to the anatomy and physiology of the human eye when it describes the shape and size of the human eye in metaphorical terms relating these features to the shape and size of objects such as flowers, spears, etc., in the external world. It also discusses and gives description of the facilitating and constraining influences of human eye in perceiving things. The highest level of its concerns relates, however, to the ultimate values attached to eye by man and society.

In *Tirukkural*, use of eye for communication is portrayed more frequently in the sections dealing with love between man and woman. Of the different types of seeing, glance takes the pride of place. In fact, in the portrayal of communication via eye between man and woman who are in love, the emphasis is not on seeing, but on the avoidance of seeing one another straight, face to face. Avoidance of looking at the lover in public, and looking at him when he does not look, all indicate the love the woman has for the man whom she loves. Those who are secretly in love with one another hide their love from others by looking at each other as enemies. Also the eyes of those who are secretly in love with one another look at each other as if they were strangers. That words are of no use when the eyes reveal the love for one another is also recognized. That is, eyes express certain matters better than words. It is also recognized that whereas mind can travel

to places far beyond, the eye cannot. The glance of the girl one is secretly in love with is death personified (since the glance kills the man, takes away his life). The eye of the girl one is secretly in love with is compared to flowers, moon, fish and stars on assumed similarity in shape and quality. The power of the eye is derived from its beauty. Stealing glances is a major part of revealing one's love. Again, the glance of the girl one is secretly in love with performs two functions simultaneously. Sleeplessness, to be lying wide awake without even a wink is yet another form of nonverbal communication to indicate the intense feelings caused by separation. It is the eye that leads one to fall in love and it is the same eye that bears the brunt of suffering caused by separation -- sleeplessness, crying, anxiety, restlessness. It is the eye that reveals one's suffering caused by love, in spite of the girl's effort to hide the suffering. Eyes communicate the lovers' physical state and mental suffering caused by love. It is the eye that craves to see the lover. When the girl sees her lover, all her suffering leaves her on its own. It is the eye that gives hope to the lover. It is the secret glance that consoles. And then, one is unable to see the fault of the lover when he is present just as one is unable to see the object clearly when it is closest to the eye.

In spheres of life other than love between man and woman also reference to eye as a communicating tool is often made. There cannot be any sign better than tears that reveal the love locked in. Numeracy and literacy are the two eyes that the human beings (should) have. It is only the educated who should be considered as having eyes. All others have nothing but two wounds in their faces. The purpose of having eyes is to have mercy/love for other beings. For the king the two eyes are the intelligence services and the

authoritative books on state-craft. A chief characteristic that a spy should have is a fearless gaze. Also a major function of the eye is to retrieve the implicit meaning in a communicative event. Man's intelligence is dependent on his eyes. Eye is also associated with valour.

In essence, the literary works consider eye as a carrier and communicator of emotions. Eyes are seen engaged in revealing, hiding and giving misleading information. They abet and are linked with other body parts in the communication process. The literary works transfer the role and function of the human eye from the physical and earthly interpersonal planes to the plane of high moral values, prescribed in a society, as their ultimate function. The eyes are metaphorically extended to highlight abstract moral values/skills on the one hand and to earthly objects in terms of their size, shape and quality on the other.

### **3.4. Eye and Nonverbal Communication : Proverbs**

Tamil proverbs focus their attention on the structure and function of the human eye at least on ten different aspects: (i) Need for cultivating precaution through a diligent use of eye symbolizing prediction of what will happen is emphasized. (ii) That it is difficult, rather impossible, for one to find fault with oneself is also emphasized by metaphorical extension of one's inability to see what is in one's eye. (iii) Eye is to be used as a diligent guide and instrument for one's proper mobility in the physical world and for one's proper conduct in the society. (iv) The eyes are employed to hide the information as well as to reveal the hidden feelings and information. (v) Eyes are compared with objects and beings to highlight the importance, the essential nature and the leadership and guardianship qualities of these objects and

beings. (vi) Eyes reveal the anxiety, disappointment, affection, intelligence, valour and cunning. (vii) Pre-tension is practised with or without success through the manipulation of eyes. (viii) The ever-shifting eye shows a measure of speech with which speed of events and objects are measured. The ever-shifting eye also symbolizes the shifting qualities of human nature. (ix) Also the eye is used as a measure of beauty -- 'beauty that cannot be contained in eyes' is one way of describing the exquisiteness of objects, events and individuals. (x) In general the size and shape of the eyes are compared favourably with objects, such as flowers, stars, fish, etc. (xi) Eyes reveal jealousy, greed, anxiety and anger. Eyes reveal love and affection. Eyes, indeed, reveal everything one has in his/her mind. (xii) Eyes reveal the status one has.

Proverbs in all the Indian languages give out information such as the above. What is most revealing is the similarity in ideas on as well as functions of the human eye found in religious texts, literary works and in proverbs. All these focus upon the evil and good aspects of glance, social functions of the human look and the values attached to various looks in different kinds of relations.

### **3.5. Eye and Nonverbal Communication : Sculpture**

Eyes play a part in early Indian sculpture in revealing the emotions portrayed by an image -- 'the drowsy eyes of a somnolent crocodile, and the grim look of the bulldog, rendered in so annoyingly charming a manner form part of the perfection in the portrayal of the anatomical features in Harappan art' (Sivaramamurti, 1961). This cannot be said for sculpture in historical periods. For reasons see below. Most of the Indian sculpture do not portray/exhibit pupil of the eye. This

is more so when divine beings are portrayed. If one looks only at the eyes of the images, most of the images appear to be emotion-less, with a sort of nonchalance, a blissful, carefree and indifferent look because of nonportrayal of the pupil. Since the pupil is not carved, there are certain constraints imposed on the use of eye as a communicator. The peripheral side glance indicating directions of look is not portrayable directly since the pupil is not carved. Also the emotions cannot be directly portrayed for the same. The pupil-less eye leads on to the look of nonchalance, etc., mentioned above. However, the emotions are conveyed not through the eyes but through the posture of the body or bodies involved, the pose of the eyelids, supported by other facial expressions and also through other suggestive designs including the story and conventions that are expected to be the basis of interpretation and portrayal of the sculpture. In other words, interpretation and portrayal of emotions in the sculpture are made possible by episodes and by other suggestions in the sculpture, and not by eyes in most cases.

Perhaps there is some greater truth and validity in what is said, since in real life as well there are cases wherein eye alone cannot express all the emotional denotations and connotations for certain emotions. That is, certain emotions are expressed in a joint manner by all the parts of the face, body posture, overall linguistic and non-linguistic contexts with perhaps eyes taking a lead role, while certain other emotions can be independently expressed by the human eye. For the latter category, the pupil and pupillary movement are essential. Since these are not provided for in the traditional Indian sculpture in most cases, nonverbal communication via the eyes in the sculpture depends on other means indicated above.



In spite of all the above conditions, it is still possible to have a categorization of looks in the sculpture based on open, half open and closed eye variables. We find in some cases the categorization can be made on the basis of provision or lack of provision for the pupil. It is also our surmise that when Indian sculpture began to portray images of real human beings, such as kings, poets, etc., and when it began to release itself from the Buddhistic faces of humans, the pupil began to appear in the carvings of images of kings, dancers, etc. From the perfect body and perfect and emotionless eyes of the gods and even humans, we go to a portrayal of human bodies and eyes indicating real age of the person portrayed and the emotion intended to be exhibited through eyes, eyelids, pupil-position, etc.

### **3.6. Eye and Nonverbal Communication : Social Factors**

Proxemics is directly related to social institutions in Indian contexts while at the same time it is also important for the interpersonal relations outside the pale of social institutions. Neither vision nor eye is directly related to the same extent to or is exploited by the social institutions. However, there are certain phenomena which could be considered as falling within social institutions. Superior status of the person addressed is indicated in certain Tamil castes by speakers not looking at the addressee. Respect is shown to the individual addressed in this manner. The individuals shown this respect may be close relatives, (males-in-law elder to the speaker), individuals of higher socioeconomic status and employers. This form of communication posture is resorted to more by womenfolk. This posture is achieved by looking away from the individual addressed, including looking down on the ground in case the

person addressed stands face to face. While this form of communication is generally adopted to show respect, there are also certain religious injunctions that proscribe looks of individuals of lower castes upon superiors and on food and other objects offered to the deities. Sometimes these members of the so-called lower castes are also proscribed from seeing the idols/objects of worship. To carry out the above it is conjoined upon the members of the so-called upper castes to conduct themselves and their religious acts in such a way that the members of the so-called lower castes would have no opportunity to cross the proscribed limits of vision and space. Note that, in this, social behaviour expected from the members of some so-called upper castes and lower castes, proxemics of vision plays a crucial role. Also note that in the social plane, as explained above, nonverbal communication via eye is nonverbal communication negating or proscribing the use of vision. At the level of religious practices also, proscribing vision is often practised. For instance, on certain occasions of *abhishekams* a cloth curtain is raised between the idol and the devotees. The priests will be performing special pujas behind the curtain. Sometimes the Ganesha image made up of clay and kept and worshipped at home on the day of *Vinayaka Chaturthi* is taken out and disposed of in the river or in the well without others seeing the image. The image is generally taken out by individuals covering the image with a towel/cloth and is thrown into the river or well. Note also that after performing certain religious rites one is asked to proceed straight without looking back. Here also vision is proscribed. Casting of the evil eye is another familiar notion. Again, here one is expected to protect himself or herself by not giving any opportunity to others to see what one has or does. Thus in many cases at the social level

vision is proscribed; proscription and adherence to proscription come to communicate.

### **3.7. Eye and Nonverbal Communication : The Interpersonal Plane**

#### **(i) Various Types of Looks**

The vision or look between individuals engaged in communication is of several types, namely, one sided look, face gaze, eye gaze, mutual look, eye contact, gaze avoidance and gaze omission (von Cranach, 1971). One sided look is the gaze by one person in the direction of another's face. Face gaze is directing of one person's gaze at another's face. Eye gaze is directing of one person's gaze at another's eyes. Two persons gaze at each other's face in mutual look. In eye contact, two persons look into each other's eyes and are aware of each other's eye gaze. Avoidance of another's gaze is called gaze avoidance. Failure to look at another without intention to avoid contact is gaze omission.

In general, eye plays very many roles in the communication processes between individuals. Eyes signal communication as well as communication avoidance. They also provide information and feedback which regulate speech between individuals. Eyes perform monitoring, regulatory and expressive functions in interactions between individuals. 'Monitoring occurs when the speaker looks at the listener for cues on which to base his future behaviour, such as at the end of long utterances (to see if the listener wants to speak) or at the end of phrases (to ensure that he is being followed). A speaker can regulate conversation with his eyes by looking away (to maintain the floor) or by giving the listener a prolonged look at the end of his utterance to signal that a response is desired' (Kendon, 1967). Eyes serve

to initiate and terminate social interaction. As part of their expressive functions the eyes express likes and dislikes, reveal the status of individuals in the contact situation, and become the vehicle of expression for several categories of emotions.

Each of the seven types of looks listed above has several communicative functions. Both gaze avoidance, which is deliberate avoidance of another's eye gaze, and gaze omission, which is failure to look at another without intention to avoid contact, indicate either a desire not to communicate or an unreadiness to communicate. In the case of gaze omission, the individual who fails to look at another is not even aware of the presence of the other individual. Omission is not deliberate in the sense that the individual who fails to look at another does not plan the omission; it comes to him naturally, either by cultivation as a means to exhibit one's status or through sheer sloppiness. Gaze avoidance, on the other hand, may be indicative of loss of self esteem and/or guilt on the part the individual who avoids looking at others; it may be also indicative of emotional arousal and/or the condition of being emotionally upset. Another reason for gaze avoidance could be the dislike the individual has for the other whom he avoids to look at. Sorrow or fear could be another reason for gaze avoidance. Communication of submission is yet another function of gaze avoidance. In all these there is a common thread of some negative value running all through. It also appears that both gaze avoidance and gaze omission seem to exhibit and/or are based, in some not so clear sense, on social norms and values than the other types of looks. That is, while other types of looks could be more or less guided by interpersonal relations without involving social values, gaze avoidance and gaze omission, however, do become vehicles of expression of these values and norms.

In the mutual look, two persons gaze at each other's face and this imitates as well as maintains speech. During the course of interaction, each looks at the other for a particular length of time. 'For how long at a time each looks at the other depends upon the dyad'. The status of individuals involved, the emotional attachment the individuals have for one another, the sex of the individuals, the urgency and importance of the matter conveyed verbally or nonverbally, the emotional conditions of the individuals at the time the exchange takes place are some of the important variables that govern the frequency of mutual look as well as the length of time of the mutual look. For example, the person who assumes a lesser status in age, sex (female generally in Indian contexts) or in socio-economic and political terms strive his/her best to maintain the mutual look for a considerable length of time whereas the person assuming a superior status is at liberty to maintain it or not. Mutual look is demanded when instructions are to be given by the person assuming a superior status. Since the person assuming a superior status is at liberty to discontinue the mutual look at his will, the frequency and facility with which the mutual look is converted to one sided, fixed look on the part of the other individual acts as a measure of status for the individual who refuses to maintain the mutual look posture. Mutual look is also demanded when attention is to be paid to the content of communication. Mutual look helps secret communication between individuals. The length of time of mutual look and the frequency of mutual look are then dependent upon the nature of content communicated. In many cases just a mutual glance is enough to communicate confirmation or negation of a matter shared by the individuals looking at each other. In several others mutual look at infrequent or regular intervals is resorted to. Thus, while investigating the role and function

of mutual look we have to distinguish between mutual looks that are ordinarily and naturally exchanged between individuals engaged in face to face communication which has the primary function of initiating and maintaining speech as well as creating empathy between the individuals while giving supportive props for what is conveyed by speech, on the one hand, and the various types of mutual looks that carry values over and above the former functions. It is also necessary to identify as to whether the mutual looks are employed for secretive communication. Mutual look may also be employed for assessing each other.

The distinction between mutual look and eye contact is one of duration. Eye contact is the initial phase of mutual look. Two persons look into each other's eyes and are aware of each other's gaze. The gaze in eye contact changes into mutual look once the contacts are established and when the gaze is exploited by more regular and established exchanges. The eye contact has the function of recognition, conveys the feeling of anticipation, may begin a secret communication between the persons in eye contact, can indicate the agreement and consent between the individuals. It can also reveal mutual interest and can arouse emotions, and further cement inwardly the interpersonal relations.

Eye gaze which is the directing of one person's gaze at another's eyes is one of concealment, or a deliberate or a genuine failure to recognize the other. Such an eye gaze is generally found in the beginning of an encounter which very soon gets transformed into mutual look, eye contact, gaze avoidance or gaze omission, in the course of the interaction. When compared with face gaze, which is directing of one's gaze at another's face, eye gaze is indulged in if one is interested

in pursuing a path of some sort of interaction with the other individual. In other words, the face gaze generally takes place earlier than eye gaze. Also note that one sided look may precede face gaze. All the three -- one sided look, face gaze, and eye gaze -- described in this manner are generally relevant in encounters between individuals who are not, or may be a little, familiar with one another. When two individuals (who are familiar with one another) encounter one another for purposeful interaction, one sided look, face gaze and eye gaze take on different functions. Very often under the latter conditions, the one sided look aims at assessing the other's reactions and/or arousing intended emotions in the other. The one sided look could also instigate and accelerate decisions in the other's mind. It gives or rather creates, under certain conditions/contents, some trust in the other as well. But the one sided look is engaged in for a very brief span only, although it could be applied at regular intervals to accelerate the ends desired. The face and eye gaze, however, are signals of indecision, distress, negative feelings and noninvolvement. It is, indeed, difficult to say whether any hierarchy between the two in terms either of order of occurrence or of importance can be set up.

## **(ii) Functions of Looks**

We have already given, or rather indicated, certain functions and processes while discussing above the types of looks. In what follows here we look at the functions again and identify the inter-relationships between looks in terms of their functions. We must first of all recognize that a single visual act may have a number of functions. The same visual act may function as an act of observation, while at the same time performing functions of inspection, act of concealment,

act of distraction and so on. Apart from the functions of monitoring, regulatory and expressive roles, gaze has, as already pointed out, the function of indicating the readiness to communicate. All these may be considered as the function of visual behaviour in relation to or in support of verbal communication.

Another function of visual behaviour is its facilitation of interpersonal influence and control. Very often visual acts reveal, establish and regulate interpersonal relationship, especially interpersonal attraction. We have a tendency to approach persons who look at us as opposed to those who look away. In this, the liking - looking relationship is involved. As we saw earlier, literature adds an interesting dimension to the relationship between looking behaviour and interpersonal attraction, namely, gaze aversion of a different sort. The woman in love avoids the face-to-face, eye-to-eye gaze with the man she is in love with, but only momentarily, for she comes back to him with a gaze in the next moment. Gaze avoidance which certainly exhibits functions of guilt, concealment and so on, has here the function of asserting one's love and attraction for the other, when the same is converted into rather a game of gaze aversion. This particular form of visual behaviour clearly shows how a form of visual behaviour can have several, even conflicting, functions.

Apart from attraction and aversion functions, visual behaviour may also be used to reveal and strengthen or eliminate the power or status relationship. For example, gaze is related to perceived power or status or dominance. More a person is looked at by other group members, the more he feels valued and the greater his own and other's ratings of his power. It may also be used to erode the established power or status relationship and



establish newer power or status relationships. We have already indicated how this is carried out in some contexts. Gaze omission, among other things, clearly includes assumed and/or recognized status. Ordinary language expressions abound in every language to indicate this. When a person attains a higher status it is commonly expected of him that he would have eyes only for certain people and things and not for others. He has the choice to see what he wants and this, many a time, comes so naturally to him that its initial phase of cultivation is surely forgotten in course of time and the attitude becomes natural to him in some sense. An individual is shown his/her place by gaze omission engaged in by the one who assumes a superior status. When a man becomes a pauper or puts on poor dress, nobody looks at him. A poor relation is not recognized. Gaze omission also is employed to show the anger an individual has for another. Even here, higher status, at least for the moment, is assumed by the individual who is angry and who indulges in gaze omission.

Another function of visual behaviour is arousal of awareness in the individual being looked at. Under this comes the special category of staring, against which in most societies there is a strong social norm in interpersonal interactions. However, in the worship of folk deities (Thirumalai, 1983), staring is one form of "coercing" the deity to grant what the devotee wants from the deity. It is also used as a means to get into a trance in the worship of folk deities. Violation of the social norms against staring has several significant, very violent, consequences for intra- and interpersonal behaviour. It generally leads on to challenge and quarrel, wordy and/or physical, especially when the subject of staring by a male is a mixed couple/female. Also by staring, one induces

conformity in the subject being stared at. In the animal kingdom, 'one of the most frequently reported components of agonistic or threat displays in primates is a steady, direct gaze at the object of aggression. Typically it occurs as a prelude to attack or as a substitute for it depending upon the reaction of the other animal. This reaction is usually flight, a submissive display, a return gaze, or a combination of these elements' (Hall, 1969). Note that 'staring is not necessarily perceived as a threatening signal, and does not automatically elicit flight'. While a stare has the initial function of arousal in one who is being stared at, ultimately it takes on the function and means of establishing the status relationships among individuals staring at one another.

This study of staring takes us to the next related function of visual behaviour, namely, the effect of being observed. This is the function of visual behaviour as perceived or attributed by the person who is being subjected to the visual behaviour of another. When an individual looks at us, we start attributing certain characteristics to that individual based on the types of looks that emanate from that individual. These characteristics we attribute to the individual, based on our assumption of personality traits, moods, reactions, or attitudes exhibited by that individual through various types of looks emanating from him. Thus, the visual behaviour of the one who looks at gives out as much information to us about the one who is looking at us as his look tends to take in. But in both the processes subjective assessment instigated by personality factors as well as social norms play a crucial role. A person who looks is ultimately looked at and judged for his personality and motives, etc., based on the very look which initiates the visual conversation.

Intimacy and such other contents are also conveyed via looks. In a meeting, a high eye contact from a listener makes a speaker think that he is listened to with attention and then the situation becomes pleasant and intimate to him (the speaker). This is caused also by physical proximity, topic intimacy, and facial behaviours such as smiling. However, note that this intimacy as revealed by frequent eye contact is like a double edged weapon -- it could lead to discomfort as well. Discomfort would induce shifting of looks. However, when intimacy causes an increase in liking, the increase in looking also occurs.

While a major function of the eye is to see all and reveal all, another major function of the human eye is concealment. The concealment process can be looked at in several ways. One type of concealment is total as the successful concealment of emotions and information. Another type of concealment is concealment intended for purposeful and accentuated revelation. In the second category concealment is a means to reveal whereas in the former concealment is for real concealment. Under the first category the eyes conceal truth to express falsehood. Also under the same category there is the concealment of falsehood to protect another. In both these sub-categories, however, the concealment is done with the help of other parts of the body including face and with the help of general behavioural patterns. Some of these are as follows: distraction by way of changing the subject; when the subject matter that may reveal what is hidden from the addressee is dealt with, a different aspect, not the aspect that might lead on to the matter concealed, of the same subject is focussed on; the person who tries to conceal may leave the place abruptly or in a non-suspicious manner; the individual puts on an innocent look (clear eye, plain eye,

with an indifferent posture). Also note that successful concealment depends on trust and credibility of speakers as well as the motives and exploratory skills of the listener. Concealment failure is due to failure of the eyes -- the eyes give away. This giving away may be effected in several different ways: mere empty looks, fearful looks, shifty looks, through accessories of eyes, such as tears, winks, through accessories of body parts, through emotional expression in conjunction with facial expressions and through lack of coordination between eyes and words. Also note that frequent glances exhibited by the one already suspected, coupled with distance of avoidance, presumed or real, will lead to judgement of unreliability.

The effect of social proximity on visual behaviour also reveals the constraints imposed on visual behaviour by social factors and their facilitative influence. Two persons, apparently equal, exchange eye contact frequently to express their assessment of the third person who is present and who may or may not be socially inferior to them. Again we see that social proximity and frequent personal contacts do induce more communication via eye. Another point that one notices is that the superior does not always look at the inferior, whereas the inferior is expected to have his/her look fixed on the superior. Social proximity among men and women, however, does not lead on to more frequent visual contacts than the quantum and frequency of contacts generally noticed, unless there is also a personal element that binds the man and the woman in the interaction. Very often we may look at each other's ears, shoulders, or adjacent areas during interaction. Also when two individuals are seen exchanging glances more frequently, the observers assume that these individuals like one another and are intimate. Thus, gaze also provides important

cues for making inferences about the relationship among individuals. Prolonged one sided looks by a female to a male suggests a long relationship whereas the same behaviour by a male to another male is taken to mean the opposite. Females appear to believe that frequent sympathetic looks indicate affection. They appear to consider frequent, longer duration and reciprocal eye contact cues as revealing positive relationship. Sex differences are found more in nonverbal communication than in communication via language in all communities. This is so because there is a heavy influence of social norms of conduct on nonverbal communication behaviour. In a way nonverbal communication becomes an instrument of social norms and structure. Among nonverbal conduct, differences in the use and interpretation of the use of eye is found more between sexes. Already we have referred to several differences in functions of visual behaviour between men and women. One general finding is that women engage themselves in more general looking. Sex differences also appear to be generally consistent across age. Females wish to see their partners while speaking. Adolescent girls' adjustments towards males find, both in proxemics and visual behaviour, appropriate socialization processes.

### **3.8. Approaches to the Study of Visual Behaviour**

Experimental investigations, theoretical models based on experimental investigations as well as reason and observation, biological approaches, anthropological investigations, literary and other text-based studies are the major approaches to the study of visual behaviour. The Argyle-Dean affiliative conflict theory is a good model of a balanced blend of experimental investigations and intuitive theorization. The theory suggests that approach and avoidance forces operate to determine

the occurrence, frequency, and quality of eye contact. Affiliative need and a desire and urge for visual feedback operate as approach forces. Avoidance seems to be based on fear of being seen and of revealing one's inner feelings. Eye contact generally serves the following functions: information seeking, signalling that the channel is open, concealment and exhibitionism and establishment and recognition of social relationships (Argyle and Dean, 1965). Experimental investigations cover very many situations of interpersonal and group contacts. The findings all converge on certain basic patterns. But these basic patterns differ from one group of investigators to another group of investigators. For example, while the Argyle-Dean affiliative conflict theory emphasizes the role of approach and avoidance in communication via human eye, several other investigators focus on the retrieval of personality factors revolving around the use of eye as a communicative means (Mehrabian, 1971; Anastasi, 1958). Another focus has been on the relationship between visual behaviour, liking, status and power. Yet another focus is on the proxemic characteristics of communication via eye. Pupillary movements in relation to personal choice of objects and the processes of decision making form another level of experimental investigations. However, the relationship between eye and language use has not yet attracted the attention of experimental investigators.

Study of biological bases and/or constraints of visual behaviour forms another major approach. We have already referred to the position of Hall (1969) in section 3.1. Hall points out that the structure of eye may impose certain constraints and/or facilitate certain angles of viewing. Attempts are also made to identify the biological bases of visual behaviour through researches on direction of gaze. Researches are undertaken to study the

direction of gaze and brain functioning. The relationship between right handedness and eye movements is also investigated. Right handers solving verbal problems look to the right. They look to the left when solving numerical and spatial problems. Left handers are more equal in the frequencies of their eye movements. Pupillary movements are also investigated; the facilitating and constraining factors are identified.

Relationship between proxemics and use of eye for communication marks the major focus of investigations based on anthropological approaches. Social-cultural influences in the use of eye are another dimension of these studies. There is a close linkage between anthropological approaches and the literary and text-based studies of nonverbal communication via eye. At times, it is, indeed, difficult to distinguish between the two.

### **3.9. Face and Nonverbal Communication : What is Face?**

Face is a very important area and channel of nonverbal communication. More than any other body part, face instantaneously communicates, and readily reveals and exhibits the emotional states. The interpersonal attitudes and relations are more clearly established on the face. Face is the first part of the body that one looks at. Face is defined as the front part of the head, from the forehead to the chin. While this definition refers to the anatomical area of face, the use of the word referring to face in many languages refers to several other extended concepts. The word for face is used to refer to a look or expression on the anatomical area defined above, to refer to an expression or look which indicates ridicule, disgust, etc., grimace, boldness, impudence, outward appearance, outward show or pretence,

good reputation, dignity, and prestige. It also indicates the amount specified in a bill or note, exclusive of interest, the manifest sense or express terms as a document, the geographic characteristics or general appearance of a land surface, the surface, the side or part of a side upon which the use of a thing depends, the most important or most frequently seen side, front, the acting, sticking or working surface of an implement, tool, etc., geometrically any one of the bounding surfaces of a solid figure, in mining the front or end of a drift or excavation, where the material is or was mined, in printing the working surface of a type, of a plate, etc., the general style or appearance of type, any of the outer plane surfaces of a crystal, when confronted with, entrance, gate, and so on. The word *face* thus covers a great many meanings with extended values. However, there are, indeed, not many words to describe different facial behaviours, although the expressions one could put on the face are countless. The words used to describe facial expressions include smile, frown, furrow, squint, etc. Facial muscles must be viewed as very complex based on the countless expressions shown on the face. These countless facial expressions can occur one after another in quick succession and in so many different patterns. Lastly, the importance of face is derived also from the fact that quite a lot of information is conveyed by face in a very short span of time. The variety of information is also very wide.

The parts of the face and the movements of the parts of the face that are involved in the nonverbal communication are as follows:

- 1) Lip movements,
- 2) Lifting/shrinking the cheeks,
- 3) Nose and its movements,
- 4) Eye brows and their movements,



- 5) Eye lids and their movements,
- 6) Chin shaking,
- 7) Opening, closing and various other postures of mouth,
- 8) Yawning,
- 9) Manipulation of face with the help of other body parts,
- 10) Overall face,
- 11) Tears,
- 12) Smile (a clearly distinct behaviour-based involvement of specified parts of face),
- 13) Moustache,
- 14) Ornamentation of face,
- 15) Forehead, and
- 16) Ornamentation of the head including head-gear and hairdos.

Although one could identify various parts of the face, as we have done above, it is indeed difficult to identify with any exactitude the functions of various components that constitute face. For certain parts of the face, for example, we may be able to assign specific functions/roles in facial expressions. However, in most cases, all the parts of face combine with one another to give a total effect of the expression intended. Yet, that one could differentially show emotions, in a simultaneous fashion on the face, has been demonstrated in theatrical performances and in sculpture. That is, for different uses of the potential, different parts of the face are there and the potential has been visualized. But the exploitation of this potential does not seem to have been linked with any interpersonal or social institution in societies. Even the experimental investigations have not proceeded very far. There are, however, only a few component studies. This is due probably to the difficulty in deciding what to measure in the face. One could view and focus on separate areas of the face -- forehead, eyelids, cheeks,

nose, etc., and come to definite conclusions in regard to some emotions. At the same time, for a fuller comprehension of the emotion exhibited it is the total face that should be studied. While each area of the face can theoretically distinguish among emotions, and for this there is evidence in the sayings of ordinary language, caution should be exercised if one wants to base his studies on the assumption that there is one movement in one facial area for each emotion. The sayings in the ordinary language, which assign one emotion in a specified manner to one particular area of the face, act as a tag to label the emotion and assign it to the most involved area of the face in the production and exhibition of that particular emotion. Once a reference to that particular area of face is mentioned, convention brings to our memory a chain of activities that are anchored on to that particular area of face in the communicative convention of our society. And this accentuates our understanding of the situation. Thus, the ultimate aim of linking an area of the face with specified emotion or emotions in the utterances of ordinary language, is to aid communication, and not to focus or establish the area of the face as *the* place of origin and exhibition of that particular emotion. It is clear from our own observations that for a single emotion there may be several attendant areas of the face and movements. And yet, as already pointed out, one could perhaps do research more profitably, if one persists on quantifying such information, by assuming that the facial areas may differ in terms of their relative involvements of affect-specific components and nonaffective movements. The brows and forehead are more specifically involved in certain types of emotions. Generally speaking, convention as obtained through the sayings in the ordinary language and naturalistic observations of areas of face involved in emotions indicate that fear

and sadness are best produced by and judged from the eyes and eyelids area. A combination of cheeks, mouth, eyes, and eyelids reveals happiness. Surprise is identified in brows and forehead more clearly. Surprise is identified also in eyes and eyelids as well as the combination of cheeks and mouth. Note that there is a certain amount of social hierarchy involved in the choice of the above combinations. Also note that the instantaneousness and the intensity of the event that surprises one will also influence the course of choice of the particular combinations. As for anger the entire face seems to be involved: cheeks, mouth, brows and forehead areas, and eyes and eyelid areas in some proportion of involvement. All these areas are invariably seen involved in the expressions of the emotion of anger.

### **3.10. Relationship Between Face and Eye**

Facial expressions are clearly related to expressions via eye. Face is the most important part of the "face to face" bodily encounters. The expressions on face are retrieved and comprehended via eye, and the facial expressions depend on the support of the expression via eye. Smile is among many expressions that depend not only on facial parts, such as lips, mouth and cheeks, but also on the expression given out by eyes. In a way facial expressions communicated via facial parts other than eye and the expressions communicated via the eye are independent as well as inter-dependent.

### **3.11. Face and Emotions**

A major item of expression via face is the expression of emotions, so much so that most of us fail to recognize that face is used to express other contents as well. Facial expressions of

emotions are very specific in the sense that there are specific conventions for their interpretation. Since the face is the primary site of our emotions in human interaction, we are tempted to believe that facial expressions may be an inner characteristic of man, cutting across cultures. There are several layers that we should consider. First of all we must identify the underlying neurophysical processes. Emotions are believed to be the work of three inter-related components, namely, neural activity, striate muscle or facial-postural activity and subjective experience. The feedback provided by the facial muscle contractions reveals the immediate experience of emotion. The subjective experience leads on to complex proprioceptive patterns in the neural mechanisms which arouse the diffuse hypothalamic -- cortical system while the sensorimotor area in the cortex is excited through specific tactile and proprioceptive facial receptors. Neural activity and subsequent processes in human brain are yet poorly understood. But one fact remains clear -- whatever may be the neural activities, there is modulation of these activities at the social level.

In modern psychologically-oriented empirical researches of emotions and consequent nonverbal communication, generally speaking, a three-tier organization is presumed: feelings, emotions and physical manifestations of emotions. In traditional description and analysis of nonverbal expressions, for example, in traditional Tamil grammars, a two-tier organization is generally assumed: emotions which lend themselves or lead on to their manifest physical expression as opposed to emotions which do not. The grammar, however, includes both in its purview. The latter (the emotions that do not manifest themselves in physical expressions) are generally classified and brought under the former. A pride of place in the former goes

to the set which covers the manifest facial expressions. The ancient Tamil grammar *Tolkāppiyam* of pre-Christian era gives eight bodily expressions and takes them either as the basis or as mnemonic tags for other nonverbal expressions. The emotions that are generally revealed through facial expressions are laughter (smile, cheerfulness, delight; contemptuous laughter, grin, etc.), astonishment and wonder, pride and arrogance, (and joy out of pride and arrogance, as well as consciousness of one's own greatness), pathetic sentiments (crying, weeping, agony look, etc.), fear, tread and terror, emotion of disgust, disgrace and ridicule, anger, and joy, gladness, delight, and sentiment of love and fondness. Also there are other manifest physical expressions on face identified as relating to man and woman relationships. These include perspiration, dreamy helplessness, shivering and blushing. There is an implicit recognition that the emotions are countless in number and likewise their manifest physical expressions can also be numerous. The same manifest physical expression may be employed for more than one emotion.

In the Sanskritic tradition as well face finds a place of pride in the list of emotions that have a manifest physical expression. For example, Bharata (500 B.C.?) lists the following eight *rasas* which are expressed mainly through facial expressions: erotic, heroic, pathetic, comic, ferocious, fearful, repulsive and wonderful emotions.

Unlike in the traditional Tamil grammar, the system of classification of parts of the face and assignation of differential emotions to different parts of the face, in the Sanskritic tradition, is rather elaborate. Bharata Muni recognizes that the emotions are conveyed mainly via face. He classifies the gestures into three kinds, namely, gestures of the limbs, gestures of the face and

gestures related to different movements of the entire body (**Nāṭyaśāstra** Chapter VIII, verse 9, translation by Ghosh, 1967). The facial gestures are dealt with under the gestures exhibited by minor limbs, namely, eyes, eyeballs, eyelids, eyebrows, nose, lower lip, chin, cheeks, mouth, and colour of the face. Each one of these parts is further classified into various kinds and each one of these kinds is assumed to be a means to express one or more emotions. For example, Bharata Muni suggests that there are six kinds of cheeks: depressed cheeks (cheeks are fallen), blown cheeks (cheeks are raised), full cheeks (cheeks are expanded), trembling cheeks (cheeks are throbbing), contracted cheeks (cheeks are narrowed down) and natural cheeks. Each of these has its own use in expressing emotions. The depressed cheek is used in sorrow, the blown cheek is used in joy, the full cheek in energy and arrogance, trembling cheek in anger and joy, contracted cheek in sensitive touch, cold, fear and fever and natural cheek in the remaining conditions (**Nāṭyaśāstra** Chapter VIII and verses 132 and 137, translation by Ghosh, 1967). While in the Tamil tradition, the approach seems to have been to identify the basic emotions and their physical manifestations but not the specification of sites, (since it is assumed that the same site could be used for several emotions and that an emotion could be expressed via several sites), in the Sanskrit tradition, the approach is to link individual emotions to particular sites in the face. Note that this assignation of site is one of overlapping nature. For, in the same site, different emotions may be shown. Also the same emotion may be expressed in different sites.

Modern research on facial expressions revolves around certain questions: Definition of what we mean by emotion; the validity of categories or dimensions of emotions, such as pleasantness, anger,

pride and so on; the question of correctly identifying the emotions on the face so categorized; the question as to whether we could identify specific parts of the face for emotions distinctly categorized; the influence and role of contextual cues in the correct characterization of an emotion observed, and how the "spontaneous" emotions are controlled, regulated and transferred to other media. The research focuses also on as to how one could reach an agreement with the other about the nature and site of emotion observed. If there is no agreement as to what the particular emotion under observation is, comparison across individuals and emotions cannot be carried out. There should be some agreement as regards the meaning of a particular exhibition of an emotion. In this connection, several techniques have been adopted to establish the validity of one's judgement. Photographs of the face are presented to some, and to some photographs of the whole picture along with the social context are presented. The individuals are then asked to identify and mark emotions involved. Another way is to seek expert judgement from individuals engaged in the exploitation of facial expressions. One could also present enacted sequences in still photographs, movie films and video cassettes. These methods are generally resorted to as preliminaries to research. These have resulted in significant but varied information. Often one notices that although there is a wide agreement between individuals in judging the character of emotions exhibited, there is also wide ranging disagreement. The disagreement is traced to the sociocultural milieu of the individuals as well as their personality factors and cognitive abilities. The kind of exposure and the role of emotions in their professional contexts also appear to influence their judgement of what an emotional exhibition signifies. These also influence their ability to recognize and distinguish emotional

states. It appears, however, that positive emotions, emotions such as happiness and surprise, are easier to recognize and distinguish when compared with negative emotions of fear, sadness, anger and disgust.

Modern researches have also led to several classifications of emotions. Osgood (1966) suggests the following as primary referents: Pleasantness (joy and glee versus dread and anxiety), control (annoyance, disgust, contempt, scorn and loathing versus dismay, bewilderment, surprise, amazement and excitement), and activation (sullen anger, rage, disgust, scorn and loathing versus despair, pity, dreamy sadness, boredom, quiet pleasure, complacency and adoration). Ekman, Friesen and Ellsworth (1972) offer a three dimensional framework, namely, pleasant-unpleasant, attention-rejection and sleep-tension (intensity control). They also suggest a set of basic emotions which could not be profitably reduced further. These are happiness, surprise, fear, sadness, anger, disgust-contempt and interest, the seven major primary affect categories. Note that the traditional grammars in Tamil and Sanskrit also adopted the strategy of identifying and listing basic emotions.

There are two schools of thought as regards the notion of universal facial expression. Birdwhistell (1970) argues against the notion of universal facial expression and maintains that all body movement is learned and communicated. Ekman (1972) identifies both universals and culture-bound aspects. Darwin was the first to propose universal facial behaviours for each emotion. Allport (1924), Asch (1952), Tomkins (1962), Izard (1971) and Ekman (1972) wrote in support of this view. Birdwhistell (1970) and LaBarre (1962) argued that facial expressions are culture-bound. Of great interest for us is the theory of Ekman,



since his theory accounts for the intuitively felt universal aspects of facial expression on the one hand and the obvious culture-bound facial expressions on the other. For him different facial behaviours are both universal and culture-bound. Universals occur as a result of the relationship between distinctive movements of the facial muscles and particular emotions, such as happiness, sadness, anger, fear, etc. The cultural differences in facial expressions are due to the fact that the elicitors of particular emotions vary across cultures. Such cultural differences are also due to the fact that there are differences in the rules of socialization which control facial expression in particular social settings. Differences are also due to the fact that the consequences of emotion arousal vary with culture.

Ekman's theory of facial expressions consists of elicitors that evoke the innate facial affect programme which is in turn modified by cultural display rules, resulting in certain behavioural consequences. Elicitors can, in some cases, be unlearned, such as a disgust expression in respect to a bad smell or taste, or surprise expressions to a sudden loud sound or unexpected event. Most elicitors of emotional reactions are learned and a majority are interpersonal in nature and tied to the culture. Though the facial expressions may have the same meaning across cultures, the stimulus that elicits it may differ from culture to culture. 'What is universal in facial expressions of emotion is the particular set of facial muscular movements when a given emotion is elicited'. Ekman posits, as already pointed out, seven primary emotions, namely, happiness, anger, surprise, fear, disgust, sadness, and interest. Each of these is associated with distinct neural effect which are universals. Compare the seven primary emotions with those suggested by the eight primary ones

in both the Tamil and Sanskrit traditions. Ekman also provides for secondary emotions. These secondary emotions are called blends. The blends occur in four ways.

1) They may occur because of a rapid sequence of two primary emotions which to an observer may be perceptually fused into a blend.

2) One area of the face may show one emotion and another part of a second emotion.

3) The right and left sides of the face may show different emotions.

4) A blend can be the muscular movement resulting from activation of primary emotions. The blends help us account for the numerous and countless complex facial expressions of emotions and of emotion words which far exceed the small list of primary emotions.

### 3.12. Facial Expressions and Context

In real life we always observe others' facial expressions in some situation or other. Hence, the interpretation of facial expressions depends also on the situational contexts. Likewise the situational context is inferred by an observer who is not fully acquainted with the situational contexts he is in, by an interpretation of the facial expressions. Thus, one may investigate as to how much information facial expression provides when the situation is known as well as when the situation is not known. One should also note that the situational context dictates what emotion is judged rather than the person's facial expression. Generally we tend to interpret the judgement as synonymous with the facial expression observed.

Researches focus upon the relationship between emotional expressions on the face and the

accompanying/corresponding verbal texts. If a sad story is presented with a happy face, it is the verbal context that takes over. When a sad face presents a happy story, the sad face influences the appreciation of the happy story. In most conditions, the facial cues are a key to an understanding and interpretation of actually prevalent interpersonal social contexts. Social norms have prescribed facial expressions for various contexts. Failure to adhere either wilfully or unknowingly, leads to confusion on the one hand and penal courses on the other. That is, while in the initial stages the social norms prescribe facial expressions, in the long run the facial expressions come to signify and stand for the social meaning. Ultimately the facial expressions themselves become the social meaning. There is yet another constraint/facility as well. This relates to the kinds and extent of emotions that should be displayed on face. A facial or contextual cue supplies information about emotion to observers as conditioned by the sociocultural milieu and the personality factors of the individuals. Also some emotions are to be accentuated while some may be played down. Thus, face becomes a deliberate mode of nonverbal communication, regulated by context of various sorts.

### **3.13. Concealment and Transformation of Facial Expression**

That facial expression is natural and not cultivated is one of the generally held views. Such naturalness is also sought to be related to the sincerity of heart. It is further assumed that whatever be the force of controlling and restraining circumstances, the true feelings will certainly be revealed by the face. There is a strong belief in all societies that ultimately the face communicates the emotion in an accurate manner when

compared to other modes of communication. Yet it has been found difficult by researchers and observers to identify accurately the emotions expressed. At another level it is also clearly recognized (and the existence and flourishing of dramatic arts is a sure indication of this recognition) that facial expressions can be imitated, and since these can be imitated one could choose facial expressions to meet various ends. In other words, one could conceal one's own emotions and put on some other emotions. Concealment also includes transformation of one emotion to another either deliberately, or warranted and/or instigated by the progress of situations. The facility to conceal and transform emotions indicates to us that there are, indeed, two categories of emotion -- one category consisting of emotions natural in some sense including both the universal and culture-bound aspects of emotions, and another category consisting of emotions deliberated, based on individual motives.

Also note that the purpose of concealment is manifold. Concealment may be due to demands made on individuals by the socialization processes. This comes under the first category of emotions. There could be concealment for purposes of prevarication caused by individual's motives, and the conditions of predicament, etc., in which the individuals are placed. There could be concealment for the sake of self preservation. These and similar types of concealment belong to the second category of emotions listed above. There could also be concealment in both the categories of emotions, the major purpose of which could be accentuated revelation of the intensity of emotions attempted to be concealed.

Revelation through concealment is an area that has been greatly explored in literary arts

including painting and sculpture. But this area has been practically left out in empirical investigations of nonverbal communication. Empirical research tends to look for sites where the concealed information may find an outlet. This is based on the assumption that concealed information is bound to find out an outlet, revelation of what is concealed through certain physical sites. Ekman and Friesen (1969) utilizes the concept of channel capacity to explore the sites of revelation. Channel capacity is defined as the amount of information a communication medium can transmit per unit time. In this regard facial cues are rated highest, then hand, and finally the feet/legs. Ekman and Friesen's hypothesis is that the areas of the body with lower channel capacity are more informative about deception. Specifically then, when a person is deceitful his feet/legs should be the most informative about the affect he conceals, then his hands, and finally his face (Mehrabian, 1972). One is tempted to use these results for finding out "real truth" applying third degree methods, in addition to verbal cross-examination. Some times the so-called "real truth" is identified in this manner; but many a time such applications are misplaced, since cultural factors may intervene and lead on to a misreading of the behaviour of the accused. At another level, one should realize that prevarication and concealment of truth are made possible because of the inherent characteristics of the communicative media, both verbal and nonverbal, on the one hand, and by the determination of individuals to conceal "truth" based on intense motivation. So, a complete dependence, a sole dependence, on the indicators of "truth" should be avoided.

### 3.14. Social Factors and Facial Expressions

Innocence, cunning, cleverness, foolishness

are all related to facial expressions in most societies. Humility, arrogance, pride, and hatred are also related to facial expressions. Expressions such as "milky face" indicate innocence coupled with tender age. A child's face is viewed as full of innocence and a villain's face is viewed as full of cunning. One distinguishes between a "rural" face from an "urban" one, an "educated" from an "uneducated" face, a "kind" face from a "cruel" one, a merciful and/or blissful face from a plain face, and so on. Matters such as these have not been investigated empirically. They have not been related to structure of the face in objective terms. It will be interesting to list the features of face one considers relevant to characterise the face as one of cunning or innocence or of loving nature, etc., in arriving at values attached to the faces and facial expressions. There appears to be some study of facial muscles, their concentration and movement in addition to the overall organization. Faces and facial expressions also reveal socioeconomic status of individuals involved in face to face communication. These elements are also not empirically identified. We give below certain variables that one considers in judging whether a face is a face of innocence or a face of cunning or hatred, within the context of communication using Tamil.

- 1) Absence of a moustache,
- 2) Age below 20 and above 50,
- 3) Fair complexion,
- 4) The structure of nose,
- 5) The structure of eye,
- 6) Non-deformity, blemishless face,
- 7) Wrinkles on forehead,
- 8) Lustre/glow in the facial skin,
- 9) Smile on lips and eyes,
- 10) Lack of idiosyncratic movements of eye/nose/lips and tongue, and

## 11) The arrangement of teeth.

These and other features cannot be ordered into a hierarchy. They operate in an interlinking manner simultaneously. The assumed social and economic status as well as the antecedents of the individual whose face is being judged will also influence the assessment.

To conclude, one may point out that the study of face in communication, just as the study of eye in communication, could be looked at from three levels. In the first level we have the study of the structure of face as an anatomical feature. In the second level we can study face from the point of view of the constraints and facilities offered by face as an anatomical unit. At the third level we may investigate the use of face in communication from the social and interpersonal points of view as opposed to its study purely at the individual level. The use of face is constrained and facilitated by socialization processes in every society. In addition the individuals also bring to bear upon the processes of communication their own personal characteristics and styles. Also facial expressions for specified contents could form part of the overall influences in fashions. In addition, facial expressions for a specific content could vary not only from age to age of an individual's life but also across different historical periods. These matters have not yet been investigated in any depth.

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## CHAPTER 4

### LANGUAGE AND SILENCE

#### 4.1. Oral Utterances as Nonverbal Behaviour

Both in traditional Indian grammars and in modern studies of nonverbal behaviour, certain types of oral utterances are considered to be nonverbal behaviour. These oral utterances may be linguistic utterances in the sense that, like other utterances in a language, these utterances could also be divided into words, phonemes, etc., and these utterances are, thus, linguistically structured. Other oral utterances, which cannot be analyzed into recurring linguistic units and patterns and which are generally treated as matters outside the purview of linguistic utterances, are another category which falls within nonverbal utterances. While, thus, nonverbal behaviour is considered, both in modern times and in traditional ancient grammars as anything other than speech (in traditional grammar anything of communicative act that manifests itself in bodily actions other than speech), there has always been a recognition that certain oral utterances are also to be treated as nonverbal behaviour. In *Tolkāppiyam*, a Tamil grammatical treatise of pre-Christian era, there appears to be a distinction made between oral utterances that are the conveyors of information based on internal deliberations and oral utterances that convey internal emotions. An utterance



that reveals the internal emotions, utterances that are 'emotional outbursts of inner commotion and feelings' is considered an utterance of **meyppāṭu** (communication via bodily manifestations). This category could include utterances which in modern linguistics are generally considered paralinguistic as well as regular linguistic utterances, which are analyzable into and made of phonemes, words, sentences, etc., the building blocks, structures and patterns of regular linguistic utterances. Such a position is found attestable in the Sanskrit tradition as well. Bharata considered that regular speech utterances could also be one of the **abhinayas**. This abhinaya he called as **vāchika abhinaya**. The ancients arrived at this very significant conclusion because of their analysis of *Rasa* and *Dhvani* concepts. As pointed out in the first chapter, both these concepts have ready relevance to the foundations of research on nonverbal behaviour even today. In fact the concerns of the theories of *Rasa* and *Dhvani* are very much the basic tenets of modern studies of nonverbal behaviour, although not recognized so in the discipline. Abhinavagupta, that great master who among all others must be considered the greatest intellectual architect of synthesis and innovations of Indian studies and whose studies could easily be ranked with those of Aristotle, seems to have realized that no system of poetics, like no system of Dramaturgy, can ever completely ignore the feelings, moods and sentiments, and must find an important place for *Rasa*, the manifestation of which is as much the business of poetry as of drama. He elaborated the theory of *Rasa* in such a way as to remove the deficiencies of earlier theories by supplying additional features and also fitted it well into the *dhvani*-theory. The *dhvani* school, in its analysis of the essentials of poetry, found that the contents of a good poem may be generally distinguished into two parts. The first part is that which is

expressed and which includes what is given in so many words; in the other part, content is not expressed, but must be added to the poem by the imagination of the reader or the listener. The unexpressed or the suggested part, which is distinctly linked up with the expressed and which is developed by a peculiar process of suggestion (**vyānjanā**), is taken to be the 'soul' or essence of poetry. To the grammarians and learned writers, it seemed paradoxical to state that the very essence of a poem is that which is not even expressed. On the other hand, some form of symbolical speech in which wisdom demands that one should express oneself more in hints and suggestions than in actual words was always in vogue, and the poets had been more or less partial to the method of speaking in metaphor or wrapping up their ideas in transparent allegories. But the suggestive poetry is something different from the merely metaphorical. The metaphorical or the allegoric, however veiled it may be, is still in a sense expressed and must be taken as such, but the suggestive (**vyāngya**) is always unexpressed and is therefore a source of greater charm through its capacity of concealment; for this concealment, in which consists the essence of art, is in reality no concealment at all. Thus, what we notice in these discussions is, first of all, the dichotomy between behaviour communicated via linguistic utterances and non-linguistic conduct. Secondly, the linguistic behaviour is divided into those expressed explicitly through words and those expressed/suggested without words. The latter is viewed, among others, merging with the nonlinguistic conduct. The nonlinguistic conduct, at any rate, becomes one of the major carriers of this suggestive role of linguistic utterances left unexpressed manifestly. Thirdly, this suggestive power, and through it the nonlinguistic conduct, is assumed to be the soul of the entire communication episode. In other words, while

the nonlinguistic, the nonverbal expression, is basic and fundamental in the unfolding of communicative processes and intent, it also becomes the most important process for relish.

In modern researches on nonverbal behaviour also, a dichotomy between linguistic/verbal utterances and nonverbal conduct is made. Further, there is also a distinction between utterances that are linguistic proper and that are linguistically organized in terms of explicitly analyzable linguistic units, such as phonemes, words and sentences on the one hand and utterances that are mainly emotional but more importantly do not lend themselves to analysis through linguistics units. There is also another category, very much similar to the ones intended in traditional Indian grammars, which, though consisting of linguistic utterances and thus should be considered verbal, derive their communicative nature mainly by virtue of their suggestive power. This power, in its turn, is derived not from linguistic structures and units present but from what is absent in such linguistic structures and units. Of the three categories which are based on verbal utterances, the latter two are considered as falling within the nonverbal category. Note that this approach is similar to the one we find in the Dhvani school. While it may not be categorically said that all those working on the nonverbal behaviour consider nonverbal as more basic than verbal language and reflecting the original bases of communication, such an attitude is easily recognized in modern studies of nonverbal behaviour as well.

We have already pointed out (in Chapter 1) that the boundary between verbal and nonverbal behaviour is always blurred. Above we have indicated that certain aspects of speech also are considered falling within the domains of nonverbal behaviour.

The reasons for this inclusion of aspects of speech as well within the domains of nonverbal behaviour are as follows: (i) These aspects, which are variously called paralinguistic or nonlinguistic or vocal phenomena, are subtle aspects of speech, not explicit, but fully comprehended by many. (ii) These aspects are not easily amenable for description. In other words, the elements which constitute these aspects are not easily identifiable. They seem to be unified as entities, not amenable for structural decomposition. (iii) What is communicated by these utterances is not due to the words and sentences that constitute the utterances, but because of their absence. Concealment communicates. The suggestive power of the utterances lies in what they have concealed. Since communication, in real sense, is not carried on, in these circumstances, via linguistic structures/utterances manifestly, one tends to take such communications as falling within nonverbal communication processes. (iv) These oral utterances work as cohesive single units independent of language as well, in addition to their being able to cut across languages and cultures in several instances, even though these utterances are made orally. (v) Yet another aspect of the problem is the difficulty in separating the verbal from the nonverbal in a total communicative context. Both are engaged and, in fact, both are needed to have a natural semblance of communication. (vi) Another criterion is that those which involve emotions and feelings and those utterances which are made instantaneously are considered nonverbal. This is stated on the basis of the assumption that there are more deliberations in the verbal conduct than in the nonverbal act. (vii) There is also the difficulty in comprehension and translation of nonverbal into verbal utterances. These characteristics have forced the investigators to consider some types of manifestly oral utterances also as nonverbal. In addition, since nonverbal behaviour is considered as distinct

from speech, it includes silence also. Fundamental frequency range, intensity range, speech errors, pauses, speech rate and speech duration also are considered features of nonverbal behaviour. These features are of a nature that somewhat eludes explicit description when used in communicative contexts. In other words, these features are employed for implied meanings and are not explicitly describable and stated as linguistic units. Also included in discussion of nonverbal behaviour are other communication phenomena, such as sarcasm where inconsistent combination of verbal and nonverbal behaviour takes on special significance in subtly conveying meanings.

#### **4.2. Nonverbal Communication Via Linguistic Structure : Implied Meanings**

The contents which we consider here as conveying nonverbal communicative information, namely, implied meanings, are also dealt with in linguistics and philosophy under the terms presuppositions, implications, implicature, etc. In philosophy and linguistics, every linguistic utterance may be conceived as an utterance of presupposition/implicature. In the study of nonverbal communication via language, however, only those linguistic utterances which leave out linguistic items (at the segmental level) explicitly and yet are understood in the sense conveyed by those items left out are considered having presupposition, implication, etc. Also items that have a direct bearing on emotional states, preferences, status and other factors of conduct in the external world receive a pointed attention. For example, the sentence *Please open the door*, when uttered, may be analysed in terms of certain presuppositions, in linguistics. These presuppositions are (Fillmore, 1969): The target addressed is in a position to know what door has been mentioned, and also only if that door is

not open at the time of the utterance. Specifically, there are presuppositions having to do with the fact that the target addressed must understand English, be believed by the speaker to be awake, not be totally paralyzed, etc., which have to do with questions of good faith in speech communication. There are also presuppositions about the existence and specificity of the door and these relate to the use of the definite article. There are presuppositions about the closed state of the door which must be treated as properties of the verb *open*.

Note that none of the above generally qualifies to be considered as an implication of nonverbal import in the study of nonverbal communication. The implied meanings taken into account as falling within the study of nonverbal communication are of a different sort. Consider another example: the word *bachelor*, when used as a predicate means only the property of having never been married and uses of this word presuppose that the entities being described are human, male and adult. This sort of presupposition, unless they are brought to the foreground for a deliberate purpose of communication, is not viewed as one of implication falling within nonverbal communicative act.

Thus, there are differences in the coverage of implied meanings in the fields of study of nonverbal communication on the one hand and philosophy and linguistics on the other. While all these three fields touch upon implied meanings, their scope of coverage and the aim of study of implied meanings are different. In linguistics, the coverage of implied meanings as part of linguistic description, and as an integral part of bases of languages as well as of performance of language, in recent times, is a consequence of developments in linguistic theory. Study of selectional restrictions,

in linguistics, led to a focus on the study of presuppositions exploited in the structural organization of language. Selectional restrictions determine which verbs can go with which nouns in a sentence. In normal language use, the nouns and verbs in a sentence must match in terms of their features. The rules that relate to the features of words are called selectional restrictions. For example, the verb *laugh* requires a human subject to produce a grammatically acceptable sentence. In a sentence, such as *The dog laughed*, there is a matching of a non-human but animate subject with a verb distinctly marked human. This matching results in a deviant sentence, which will be acceptable only if one assumes that the animal subject has or is ascribed human qualities. Originally the selectional violation of this sort was considered a syntactical error by various transformational-generative grammarians. Since this conception was seen as not fully accounting for known facts of language structure and use, several grammarians (Fillmore, 1965, 1968 and 1969) began discussing the errors of this sort as those caused by failures in presuppositions. Problems with sentences, such as *My toothbrush admires sincerity* were considered not as syntactical ones but as those which involve presupposition failure. From this the studies started covering also other aspects of implied meanings and how implied meanings are carried on and expressed by linguistic structures. Linguistic investigations revealed that presuppositions of utterances can be linked with linguistic structures and many linguistic structures are governed/used for expressing implied meanings and that there are, indeed, various types of implied meanings.

Keenan (1971) identifies items of grammatical structure (in English) that lend themselves for the expression of implied meanings. These are as follows:

- 1) **Factive Predicates:** *That Fred left surprised (didn't surprise) Mary.* The presupposition of this sentence is Fred left.
- 2) **"Definite" Names:** *John called (didn't call).*  
The presupposition is that John exists.
- 3) **"Cleft" Sentences:** *It was (wasn't) John who caught the thief.* The presupposition is that someone caught the thief.
- 4) **Selectional Restrictions:** *That arithmetic is incomplete surprised (didn't surprise) Magrid.*  
The presupposition here is that Magrid is animate and intelligent.
- 5) **Temporal Subordinate Clauses:** *John left (didn't leave) when/before/after Mary called.*  
The presupposition is that Mary called.
- 6) **Nonrestrictive Relatives:** *The Tiv, who respected Bohannon, are (are not) a generous people.*  
That the Tiv respected Bohannon is the presupposition here.
- 7) **Certain Aspectuals:** *Fred quit (didn't quit) speaking.* Fred was speaking is the presupposition.
- 8) **Iteratives:** *Fred ate (didn't eat) another turnip.*  
The presupposition here is that Fred ate at least one turnip.
- 9) **Presuppositional Quantifiers:** *(Not) only Fred shot himself.* The presupposition is that Fred shot himself.

Note that the analyses given above, in fact, most linguistic analyses of presuppositions, focus upon sentences and their parts. Note that in no case does the cited presupposition for sentences listed exhaust all the possible presuppositions. In other words, the presuppositions for a sentence can be numerous and can be visualized as a bottomless pit. Moreover, even if we are able to demarcate



clearly as to which of the implied meanings from the possible implied meanings identified/identifiable in logic and linguistics for a linguistic utterance, are directly relevant and falling within the scope of nonverbal communication, the demarcation would be a fuzzy one only, because of numerous overlappings and uncertainties. The state is caused by the nature of implication itself. However studies of presupposition in linguistics and logic have certainly hit upon an area of linguistic competence as well as of performance that requires insightful analysis. For instance, consider the following example (Cole, 1975): Pamela being asked (a), might reply (b).

(a) How are you doing in your new position  
at San Andreas Fault University?

(b) Well, I haven't been fired yet.

The question put to Pamela seeks information as to how she is getting along in her new post whereas the reply given to this question, instead of answering the question directly, reports roughly that Pamela has not yet lost her job. This reply, however, implies more than what is literally said in the answer. Pamela is suggesting, either seriously or jokingly, that being fired is a distinct possibility for her. 'When an answer, like this one is not directly relevant, the person to whom the answer is directed asks himself what conditions must obtain for the answer to be relevant. By hypothesizing what these conditions might be, he may deduce what the answer intended to communicate by means of his answer' (Cole, 1975). The deduction is based on the literal meaning of the answer and on the hypothesized state of affairs that would make the answer relevant to the question. How is this linkage between the literal meaning and implied meaning established on the one hand and how is the relation between the conversational

point raised originally by one and the answer provided (literal answer) established are questions that agitate the philosophers. In the case of linguistics, as already pointed out, the focus is on the implied meanings conveyed by a sentence and/or its parts. The focus, here, is not generally upon the implied meanings of the discourse. In the case of philosophy it is the discourse-based implied meanings that are focused upon. Conversational implicature or indirect speech acts that give the implied meanings of a conversation are focused upon in the philosophical investigations of presuppositions.

H. P. Grice (1975) makes a distinction between natural meaning and non-natural meaning of sentences/acts produced. The utterances of the non-natural meaning category do not directly give the addressee the message the speaker wishes to convey; rather the addressee must do a certain amount of inference. This is revealed in examples, such as

1) **A** asks **B** how **C** is getting on in his job and **B** replies, *Oh quite sell, I think; he likes his colleagues, and he hasn't been to prison yet.*

2) **A:** *Smith doesn't seem to have a girl friend these days.*

**B:** *He has been paying a lot of visits to New York lately.*

The conveyance of "message" in each instance of non-natural meaning is a function of the speaker's intention, addressee recognition of the speaker's intention, and addressee response on the basis of that recognition of intention. The cases of natural meaning, on the other hand, are those in which direct telling is involved; these cases tell the addressee exactly what he is to know,

"just as surely as smoke tells us there is fire". The non-natural meaning is the conversational implicature. Basically there are two types of implicature. The conventional implicature (similar to what linguists have dealt with under presupposition, listed earlier in this section) appear to be determined by the conventional meaning of the words, besides helping to determine what is said: *'He is an English; he is, therefore, brave'*. The conversational implicatures are connected with certain general features of discourse. 'Conversational implicature is basically the notion that an utterance may mean one thing as uttered while implying (or meaning) quite another thing as understood. In cases of conversational implicature, what is meant is not what is said' (Grice, 1975).

Grice (1975) points out that our talk exchanges do not normally consist of a succession of disconnected remarks; they are characteristically, to some degree at least, cooperative efforts. Participants observe a rule, namely: 'Make conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged'. This is called the cooperative principle. There are four categories with some specific and submaxims governed under the Cooperative principle. The four categories are Quantity, Quality, Relation and Manner. The category of quantity relates to the quantity of information to be provided, with the following maxims: (i) Make your contribution as informative as is required (for the current purposes of the exchange). (ii) Do not make your contribution more informative than is required. Under the category of Quality falls a supermaxim -- Try to make your contribution one that is true -- and, two more specific maxims: (a) Do not say what you believe to be false,

(b) Do not say a thing for which you lack adequate evidence. Under the category of Relation, there is a single maxim: Be relevant. Under the category of Manner -- the supermaxim *Be perspicuous* operates. Others are

- 1) Avoid obscurity of expression.
- 2) Avoid ambiguity.
- 3) Be brief (avoid unnecessary proclivity).
- 4) Be orderly.

Normal conversation between individuals is carried out in this fashion. Implied meanings are created in discourses by flouting the cooperative principle in conversations in several ways. To work out that a particular conversational implicature is present, the hearer will rely on the following data:

- 1) The conversational meaning of the words used, together with the identity of any references that may be involved;
- 2) The cooperative principle and its maxims;
- 3) The context, linguistic or otherwise, of the utterance;
- 4) Other items of background knowledge; and
- 5) The fact (or supposed fact) that all relevant items falling under the previous headings are available to both participants, and both participants know or assume this to be the case.

Grice takes the above as the basis of conversational interaction between individuals and implicitly proposes that the implied meanings are caused by some "violation" or other to these basic principles underlying conversational structure. Thus, the implied meanings are found under four categories, namely,

- (a) Flouting of Quantity,
- (b) Flouting of Quality,

- (c) Flouting of Relation, and
- (d) Flouting of Manner.

**(a) Flouting of Quantity:**

A is writing a testimonial about a pupil who is a candidate for a philosophy job, and his letter reads as follows: Dear Sir, Mr. X's command of English is excellent, and his attendance at tutorials has been regular.

**(b) Flouting of Quality:**

- 1) **Irony:** X, with whom A has been on close terms until now, has betrayed a secret of A's to a business rival. A and his audience both know this. A says "*X is a fine friend*".
- 2) **Metaphor:** You are my cream in my coffee. The speaker is attributing to his audience some feature or features in respect of which the audience resembles (more or less fancifully) the mentioned substance.
- 3) It is possible to combine metaphor and irony by imposing on the hearer two stages of interpretation. You are the cream in my coffee (You are my pride and joy), and then the irony interpretant, You are my bane.
- 4) **Meiosis:** Of a man known to have broken up all the furniture, one says He was a little intoxicated.
- 5) **Hyperbole:** Every nice girl loves a sailor.

**(c) Flouting of Relation:**

At a genteel tea party A says *Mrs. X is an old bag*. There is a moment of appalled silence, and then B says *The weather has been quite delightful this summer, hasn't it?* B has blatantly refused to make what HE says relevant to A's preceding remark. He thereby implicates that A's remarks should not be discussed and, perhaps more specifically, that A has committed a social gaffe.

#### (d) Flouting of Manner:

Ambiguity (deliberate and intended to be recognized as such).

Obscurity

Failure to be brief or succinct: Miss X produced a series of sounds that corresponded closely with the score of *Home sweet home*.

The implied meanings which are studied in linguistics, and philosophy, and in the field of non-verbal communication are dealt with differently in these fields. While in linguistics the implied meanings are studied in relation to their expression via individual sentences and parts of sentences and words, the study of implied meanings in philosophy focuses on the occurrence of implied meanings in discourse as conversational implications and also on how comprehension of implied meanings takes place. From the sentential focus in linguistics we go over to focus on discourse of implied meanings and how implied meanings are comprehended, offering an analysis of the processes and categories involved. The study of implied meanings in the field of nonverbal communication focuses more on the effects of implied meanings than on the linguistic structure or on the comprehension processes. What external factors, such as status, proxemics, etc., influence or cause the expression of implied meanings and how these implied meanings are exploited to reveal the factors/elements of nonverbal communicative behaviour become the focus of attention.

The nonverbal communication via language takes several forms -- there is manipulation of structures on the one hand and there is also the manipulation of words on the other in sentences. By these manoeuvres the speaker communicates

attitudes, likes, distances and feelings/emotions even as the constituents of sentences do not contain in themselves the same content in any literal manner. These changes, it may be noted, do occur within speech itself and may or may not have (mostly the latter) nonverbal physical manifestations. They are part of speech, but physically "found" rather in their absence in sentences. They are found in the process of manipulation, the process of implication.

Nonverbal communication via language focuses upon the communicator's particular experience of an event, his relationship to the addressee and his relationship to the message. Verbal communications seem to focus ordinarily on objective world. The individual's experiences, emotions, evaluation, preference, etc., although revealed via language units of words and sentences in an explicit manner, social constraints, emotional status of individuals, personality factors of individuals engaged in interaction, constraints of media employed, the need for secrecy and so on force individuals to resort to a type of "round about" language use with implied meanings. Individuals feel relieved and sure that they have communicated what they wanted to in an adequate manner by this process, which for them avoids embarrassing or insecure moments. There is a continuous process, some prescribed and taught by socialization processes, and some innovated by individuals but within the limits of comprehension, by which the society evolves a close conjunction between verbal and nonverbal communication.

Generally speaking, in linguistics, aspects of language use and manipulation of linguistic structures for nonverbal communication do not receive any pointed attention except in some schools or rather subschools of linguistics. However, a closer look

into the operation of linguistic structures, especially from the point of view of assumptions we have already listed (4.2), reveal clearly that nonverbal communication via language has certain specified corners in linguistic structure. Keenan's identification of these corners has been already presented above. Use of pronouns, tense, adjectivals and adverbials, and specialized words acting as symbols for a series of layers of meanings abet nonverbal communication via language. In other words, information (rather absence or distortion of information) on dramatic personae, location, time and symbols combining these three become carriers of nonverbal communication. The speaker's role vis-a-vis the above completes the cycle of nonverbal communication -- speaker's attitudes, likes, judgments, involvement, etc., become the focus in the entire episode and the distortion of information is pursued to highlight the speaker's role.

Investigation of the characteristics of language use in nonverbal communication that communicate various cues of interpersonal relationships have not been investigated in any detailed manner in linguistics (except as listed earlier). Information on this subject matter is scattered in various articles of both psychological and anthropological interests as well as in various forms of tests prepared for psychological experiments. The nonverbal communicative dimensions of these aspects were originally emphasized in recent times in the work of Wiener and Mehrabian (1968). Wiener and Mehrabian focus on the implied relationship and meanings between the speaker, the objects and events, and the message implied. They identify the relationships under various heads, namely, spatio-temporal indicators of implied meanings, denotative specificity leading on to implied meanings, selective emphasis of occurrence in an utterance which brings out the implication,



implied meanings based on agent-action-object relationships, use of modifiers to linguistic items that give implied meanings, and other processes.

Let us consider some illustrations:

1) The husband and wife living under the same roof may choose to address one another through letters, or an intermediary person, signifying the "distance" between them in their relations at that moment, to signify their anger towards one another, etc. One may choose to reply in writing to signify the distance between him and the individual he addresses, even when the person addressed is physically present face to face. The switch-over from one usual form of communication to another here signifies the changed relationship between individuals.

2) Likewise one may switch from an informal form of language use to the use of formal language; one may switch from the use of the colloquial to the written form of language signifying the change in content and/or interpersonal relationship.

3) To signify the "distance" between individuals who have had close relations until then, one may refuse to use the address terms, nicknames, pet names, and so on, to address each other.

4) To signify the "distance" between individuals, one may not use or, if one has used it till then, may stop using the first name, and address one another in formal terms.

5) To signify the close relationships between individuals, one may start using first names, pet names, etc. One may also start using terms of endearments.

6) To signify the growing "distance" between individuals, their dislikes, etc., one may use the correct form of address demanded only on formal occasions, at all the occasions.

7) The reference to individuals not present also can be so modulated as to reveal the kind of relationship,

distances, likes and dislikes, etc., the speaker has for the person referred to.

8) Spontaneity or otherwise of an acknowledgement, in words, of help rendered/received can carry implied meanings, acting as nonverbal communication.

9) Spontaneity or otherwise of an acknowledgement, in words, of some deeds, possessions, characteristics of an individual, etc., can carry implied meanings, acting as nonverbal communication.

10) To refer to a person in neuter or in masculine or feminine singular, in most Indian languages, communicates the low estimation the speaker has for the one who is addressed or referred to, especially when address and/or reference to that individual is normally in respectful terms (in plural).

11) A speaker can imply his exclusion or inclusion in a group (Mehrabian, 1972): I think we enjoyed ourselves/ I think they enjoyed themselves.

12) A speaker can imply that one particular object and not the other is involved: I think they enjoyed **the party**.

13) A speaker can imply differences in his relationship to the objects in the statement: I think I enjoyed their company.

14) A speaker can vary the tense in the utterance to imply that a particular event is relevant or not relevant now: I think they **were** enjoying themselves.

15) A speaker can choose modifiers to focus on the relationship between him and the object: They acted as if they enjoyed themselves. This ascribes ambiguity/uncertainty. I am sure they enjoyed themselves. This ascribes certainty.

16) A speaker can choose modifiers to emphasize his particular interpretation of the event: I am sure that they enjoyed the party.

A speaker can separate himself from the object

of his message, from his addressee or from the message itself. This is clearly revealed in the use of linguistic structures. This speech non-immediacy involves locative adverbs, tense and pronouns. Consider the following examples:

17) One separates himself from others who are also physically present in the same place by saying 'I do not understand **those** people'. The words **this, that, these, those, here, there, near, now, far away** and **long ago** all can be used to imply distance and separation between those engaged in an interaction.

18) Another means to imply non-immediacy is the use of tense. In response to the question "Are you a member of the Staff Society?" if the answer given is "I have been a member", this answer implies the non-immediacy between the answerer and the object. Note that in Tamil and several other Indian languages, the equational sentence pattern (with both subject and predicate as nouns and without any verb -- **itu viiṭu** "This house" meaning "This is a house") is used for "I am a member" construction and that once the remoteness in time is to be expressed, conversion from the equational to the verbal structure is demanded [**nān uruppinan** "I member" ("I am a member")] is changed to **nān uruppinanāy iruntēn** ("I have been a member"). Thus, this conversion process itself may indicate the non-immediacy between the speaker and the object. Note further that both spatial and temporal non-immediacy indicates, generally speaking, negative attitudes and preferences (Mehrabian, 1972). The choice of linguistic structures, here, is not simply a matter of style. The choice has certain functions. To that extent, language fulfils and retains the nonverbal bases of communication.

19) Denotative specificity or lack of It is another language characteristic that is exploited to imply meanings, relating to preferences, likes, etc. Consider the example given by Mehrabian (1972): Our daughter to be, our son's fiancée, his fiancée, his lady friend, his friend,

she, the person, or that thing. One notices decreasing degrees of denotative specificity in the above utterances linked with the expression of decreasing degrees of liking.

20) Consider this example: I like the wrapper of this book. Here the reference is overspecific or over-exclusive. This also shows the distance and dislike.

21) By manipulating personal pronouns to denote someone or some object, we may reveal non-immediacy. Use of **I** is more specific than **we** which is more specific than "people" which in its turn is more specific than the use of "one" in a sentence giving some generalized information. Quantum of specificity here is linked with the quantum of immediacy professed by the subject towards an object.

22) Another linguistic structure that is often exploited to indicate non-immediacy, non-involvement and lack of preference is the use of negation. The answer **'It wasn't bad'** is a good example of this phenomenon.

23) The order in which objects are presented in a conversation, etc., also indicates nonverbally the focus of importance bestowed upon persons, objects and events. The order in which persons, objects or events are presented highlights the immediacy in some sense. Note that the order of narration could be influenced by other reasons such as the emotional states of narrators. Status and importance assigned are, however, clearly implied by the order of presentation on most occasions.

24) Consider the following sets of sentences:

- (a) They are fighting.  
     She was fighting with him.  
     He was fighting with her.

Each one of these sentences presents the objective event of fighting, with some implied meaning focusing on the agent/agents. The choice of the word to denote the agent implies the view of the speaker.

- (b) I went to school with my mother.  
     I was taken to school by my mother.

These sentences imply volition or otherwise of the act.

- (c) I should go, I have to go,  
I am compelled to go.

in contrast to

I want to go, I would like to go or  
I will go.

The sentences of the former set imply compulsion.

- (d) **pēnā tolaintuvittatu**

in contrast to

**pēnāvait tolaittuvitten,**

in Tamil. The first sentence literally means that the pen got itself lost whereas the second sentence means that "I have lost the pen". The first sentence implies several possibilities/modes that have led to the loss of the pen, ascribing no particular agent or reason. The second sentence specifies the agent. Thus, the distinction between the weak (former) form and strong form (the latter) of verb, revolving around intransitive and transitive distinctions of verb communicates the extent of involvement and assumption of responsibility for the loss of pen.

25) Uses of modifiers to statements, such as **I think, I believe, I feel** implies that what the speaker experiences may not be experienced the same way by the listener.

26) Use of modifiers to statements, such as **It is obvious, It is evident, It is simply true** separates the speaker from the objects in his message. Modifiers generally have the function of indicating 'the speaker's less positive attitude toward the event described, or his reluctance to relay this information to that particular addressee' (Mehrabian, 1972). The modifiers also decrease immediacy.

27) Consider the following sentences:

- I just borrowed it for a moment or two.  
It is only a minor change.  
It is really unimportant.  
It is simply unnecessary.

Through the use of words like **just, only, simply, you**

**know**, etc., the speaker wishes to communicate his involuntary or minimal association. The use indicates negative attitudes towards the object in the message or the reporting of the events to the addressee.

28) Phrases, such as **you know?, Right?, that is, well, uh** indicate false starts and imply ambivalence.

29) Choice of terms of endearments also implies the likes and dislikes on the one hand and the immediacy or non-immediacy between the speaker and the addressee. There is a strange contradictory posture in the use of endearment terms derived from sexual organs and sexual relations. At times the use of such endearment terms is considered revealing the positive relationship between the speaker and the addressee. At other times, when the situation is tense with anger and growing misunderstanding, the use of same terms comes to imply the dislike and growing non-immediacy.

30) The same situation is found in the use of kinship terms as terms of address and reference.

31) Another process which implies immediacy as well as non-immediacy is the process of 'naming'. To imply the liking and the close relationship between individuals one may resort to calling the other in first person, pet name, nickname, etc. The process may be exploited also for implying the growing distance between the speaker and the addressee under conditions wherein the closeness of relations has been implied by means other than the use of first name.

There are several other linguistic mechanisms that lend themselves for implicit, nonverbal communication via language. These linguistic structures are generally covered in grammars as formal units (based on the order of occurrence and distribution of forms), but not usually looked at from the point of view of implicit nonverbal communication. We give below a few additional processes noticed in an Indian language, Tamil. Each of the

following is a structural process and as such the units are describable formally. But their function is found not in their formal composition/constitution but what they imply when they are used.

1) Use of neuter affixes in finite verb constructions in the place of affixes that indicate a human is the subject of the main verb in the sentence. In **Rāman pōkīrān** 'Raman - he goes, (Raman goes)' **ān** at the end indicates that the subject of the sentence is a human. The same sentence can be made to end in neuter suffix to imply, among other things, a negative attitude to the subject: **Rāman pōkīratu** 'Raman - it goes (Raman goes)'.

2) One may address an individual either in a main verb ending sentence type or in a modal verb ending sentence type, for giving directives, etc. Addressing an individual in main verb ending sentences (**nī itai appaṭi cey** 'you this that like do', You do that like this) immediately places the addressee in honorific -- non-honorific scale. Addressing an individual in a modal verb ending sentence type (**itai appaṭi ceyyalām** 'this that may do' (You) may do this like that) even with a non-honorific second person pronoun in the subject position makes one feel that the speaker wants to be either respectful to some extent or wants to be non-committal. Modal verb ending sentences in Tamil and many Indian languages carry in them an implication of non-involvement/non-committal on the part of the speaker and provide options to the addressee.

3) There are many linguistic factors found in language performance which also give out several implied meanings. For example, knowledge of other languages, in particular knowledge of English as revealed through an interspersing of loan words, phrases, idioms and sentences in the speech of the speaker imply his status and could elicit either negative or positive effects in the addressee. However, note an interesting facet. A qualitative distinction between the affects caused by the use of a borrowed word with the same pronunciation of the word as found in the donor

language as opposed to use of the borrowed word with the "corrupt" pronunciation as found in the recipient language is made. Utterance of a borrowed word with its original pronunciation as found in the donor language implies a higher social and educational status for the speaker whereas the "corrupt" pronunciation of the borrowed word ceases to evoke any particular respect from other individuals in the interaction. Use of phrases is, however, generally done only by the educated and as such use of a phrase borrowed from another language, in particular English, implies that the speaker is educated, when he uses it. Code-switching in the sense of switching over from an Indian language to English also implies a higher social and educational status.

4) We have referred to the process of neuterization which is used to imply negative effect [See (1) above]. The same neuterization process can be used also to imply a superior status of the person addressed. The shopkeeper tends to address and/or refer to the woman customer in third person singular neuter as a mark of respect. This device is resorted to by the servants. The masters also resort to this process when referring to servants to whom, for various reasons, such as age, blood relationship, etc., such deference is due. As opposed to this there is another behaviour in which elevation as a process of downgrading is resorted to. In the latter contexts, the speaker, by the norm, is expected only to use the second person singular pronoun form to address the addressee or use the third person human singular pronoun form to indicate the person referred to, since only such address and reference are appropriate to the addressee or person referred to. But, in order to imply displeasure and/or disrespect, the speaker would use the second person plural pronoun form which is normally used to show respect and the corresponding plural ending (respectful form) in the verb to indicate the person referred to. Another process is the process of downgrading when the addressee is absent. Face to face, an individual is addressed with second person plural pronoun form and with plural ending



in the verb, and other deferential gestures, etc., but when the addressee is absent, the reference is made to him with third person human singular pronoun form with singular ending in verb, to imply disrespect. At times, respect to others is to be implied by not addressing them directly using second person pronouns. Even in face to face interaction they are to be "addressed" not in second person, but in third person. Use of pronoun forms for face to face address implies showing disrespect, thus, in certain contexts. The use of other types of address forms than pronouns is to be generally avoided. This is very clearly demonstrated in master-servant relationship of old order still prevalent in villages and in the relationship between Gurus and disciples in several Hindu sects and abbeys.

Implication via language can, indeed, take on many forms -- every linguistic item can lend itself to this process, once the conversation ambit is well established between two individuals engaged in interaction. This ambit is dependent on limits of comprehension imposed on individuals by the linguistic structures and social contexts. However, the individuals can construct their own ambit which mostly falls within the socially accepted comprehension procedures but at times takes on idiosyncratic propositions. The implications are found placed in linguistic structures of individual sentences, parts of sentences and individual words. Implications are also found across sentences within the utterances of a speaker and/or in utterances jointly engaged in by the speaker and the addressee. These implications carry nonverbally, or act as means for the expression of positive or negative affects, proxemic variables involving both individual and social factors, and could also be used to reveal the status and interpersonal relations of individuals engaged in interaction. The study of nonverbal communication focuses itself on the role of the implications not in terms of the linguistic or

conversational structures but on the effects to which the implications are used.

### 4.3. Oral Nonverbal Communication

Inconsistent communication is one form of oral communication that has nonverbal denotations. There are two types of inconsistency -- one inconsistency is found in the linguistic utterance itself and another inconsistency is between linguistic utterances and nonverbal behaviour. The first type of inconsistency comes from the fact that while the utterance has the structure of a positive statement, its import is taken to be negative. This is achieved in several ways. With certain emphasis markers uttered in a tone of disbelief, the intended effect is brought out. For example, consider this Tamil sentence:

avan **tānē**, varuvān!

Oh! he? He will certainly come.

The utterance with the emphasis marker (boldface) uttered in a tone of disbelief gives the meaning that he will not come. Also, by repetition of the word or phrase which stands for the content focused, in a tone of disbelief, the intended effect may be brought out. Thirdly, by relevant and slow or non-utterance of the word focusing on the content, the intended effect may be brought out. By an abrupt stoppage of an utterance omitting the word or phrase that should have been uttered, one could bring out the intended effect. There may be an intelligent, confidence sharing and seeking look, treating the other as a confederate, which also can bring out the intended effect. Note that the effect of inconsistency in all these efforts is one of negation of what is literally meant in the utterance.

The inconsistency between linguistic behaviour and nonverbal behaviour also communicates attitudes

and positions one takes, and the feelings of the communicator. Among other things, this inconsistency between linguistic behaviour and nonverbal behaviour is used for assertion of one's own position. Inconsistency between linguistic utterance and nonverbal behaviour is a special characteristic of one who is in love. This feature has been greatly exploited in literature. While in the moral and religious planes the inconsistency between linguistic utterance and nonverbal behaviour in the sense of conduct in the world is frowned upon, the consistency in one form or another is anticipated, sought for and carefully cultivated and analyzed in areas such as diplomacy and political and economic transactions and bargains. In all these spheres, all the spheres including assertion of one's position and love, there is always a link between the linguistic utterance and the nonverbal behaviour with which it is at variance.

Just as the inconsistency between literal meaning of an utterance and overall intended meaning, caused by the coupling of literal meaning with a tone of disbelief, etc., there could be inconsistency between a linguistic utterance and the facial expression with which the utterance is made. On occasions, it is the facial expression that either supports or negatives what is stated orally. When there is inconsistency between the oral statement and the facial expression, and the facial expression is considered negating the statement made, the facial expression decides the import of the content of the message orally communicated. On the other hand, if the facial expression is kept, in some sense, neutral in relation to the content of the oral statement, the oral statement decides the import of the message conveyed. While the facial expression remains neutral or even appropriate to the literal meaning of the oral statement, the oral statement itself may

have certain modulations in its delivery speed, loudness, intonation, and accent. Or it may be made in a repetitive manner. These modulations, and not the facial expression, either support or negative the underlying statement. Also one may put on facial expressions diametrically opposite to what one says orally and may expect the addressee to understand the statement in its literal sense (which is sought to be negated by the facial expression). For this exchange to be successful there should be some prior understanding between the speaker and the addressee and also compelling contexts. Thus, note that normally the facial expression is the one that contributes a lot for correct interpretation of the communicative intent of the message. At the same time, the modulations made in the oral utterance also have an important role in the correct comprehension of the message, at times over-riding the contributions made by facial expressions. Finally, on certain occasions, the facial expressions are employed as a cover to communicate orally messages diametrically opposite to the ones communicated by facial expressions. In other words, it appears to us that, in the study of inter-relationship between facial expressions and oral communication, the dynamic processes of the situation, facial expressions and oral modulations need to be focused upon, and not merely the facial expressions or oral-statements.

Inconsistency between facial expressions and oral statements involves ambiguity and inaccuracy and, as such, in spite of overall comprehension of the communicative intent on most occasions, there will be occasions in which correct interpretation becomes difficult. This difficulty may be caused by the inadequate sharing of each other's sociocultural background; it would be caused by differences in individual speech styles as well as by educational levels. Also suddenness in the

occurrence of such divergences in expression may cause the difficulty. Excessive reliance on idiomatic expressions and on certain models is another factor in this regard.

Why does one resort to the mechanism of inconsistent messages? Is it merely for the effects? On many occasions we find that the choice is spontaneous and natural, influenced by the prevalent emotional states of the individual. Such spontaneous use of inconsistent messages as we find in sarcasm is caused by the prevalent emotional state of the individual. Saying this, however, does not explain why in the first place one should resort to the mechanism of inconsistency when one's language provides a mechanism to state straight what one wants to communicate. Inconsistency in messages is resorted to for positive as well as negative affects. (One verbally insults another while smiling. A girl says *I don't like you much* to her boy friend with a smile and loving vocalization; one could produce an irritated facial expression accompanied by positive verbal and vocal expression.) The mechanism of inconsistent messages is infrequently used, although it is used for conveying a variety of information. The use of the mechanism of inconsistent messages is also made only by individuals placed in certain types of situations. There is also a social compulsion that for certain situations one should use only the mechanism of inconsistent messages. Socialization processes in every society inculcate in individuals the knowledge of such situations that demand taking recourse to the mechanism of inconsistent messages. Apart from such socially situational factors, there are also occasions in which an individual resorts to the mechanism of inconsistent messages purely in self-defence, for self-preservation in situations that he considers inimical to his well being. In other words, although the mechanism of inconsistent

messages is part of language use, it also appears to have its independent existence outside language; it uses language structure, but is linked with non-linguistic media. It is a language use, but depends also on, or rather has roots also in, nonlinguistic media. It appears to be a part of the general communication system and not an exclusively used linguistic mechanism.

Of the several characteristics that distinguish human communication from animal communication systems, the facility to prevaricate is an important one. The mechanism of inconsistent messages must be seen as an outgrowth of this facility to prevaricate. This facility takes on several forms and the inconsistency between message and facial expression is one such form. The various forms of prevarication have all been made an integral part of social behaviour with social meanings. Prevarication retains its species preservation function at the individual level and takes on the regulatory function at the social level. Exploiting this facility at the social level in the form it is currently prevalent as a mismatch between facial expression and oral expression, the individual subjects himself to the social conduct while, at the same time, preserving his emotional states. Additionally, he finds that the mechanism furthers his interest in the form of greater effects in the communication process.

#### **4.4. Concealment Via Language**

Use of implied meanings and inconsistent messages is one form of concealment via language, but in actuality, it is intended to reveal. There could be attempts at total concealment and these attempts may have certain linguistic and/or other behavioural consequences. All societies distinguish between these two forms of concealment via

language and have been teaching their members how to go about recognizing the various forms of concealment. In the earlier sections we presented a few behavioural manifestations in both linguistic structures and nonverbal processes as regards the recognition of concealment in the former category. We shall presently see and recognize behaviour that aims at 'revealing' the attempts at total concealment via language. Note that efforts at total concealment also derive their facility from the characteristic of prevarication inherent in human communication process.

The lower speed with which one speaks, in suspicious circumstances, is considered revealing that the speaker is lying. One refuses to talk, or talks less with more speech errors under such circumstances. At the same time, if one also speaks, in some sense, in an abnormally speedier rate, goes on repeating rapidly what he has stated, under circumstances of suspicion, the speaker is considered to be lying. That is, lower speed at one end and an abnormally higher speech rate on the other end, within circumstances of suspicion, coupled with faltering at one end and rapid repetition at another, characterized in both the ends with speech errors, mark that the individual is concealing something.

Speech styles are specifically cultivated which first of all aim at the creation of speaker credibility in the listeners. Once the credibility is established (in the establishment of credibility also language use plays a crucial part), a speaker can manipulate the delivery of speech in several ways: He could tell the truth convincing the hearer that the hearer is hearing the truth. He can tell the truth convincing the hearer that the hearer is hearing a lie. He can tell a lie convincing the hearer that he is hearing a truth. He can tell a lie convincing

a hearer that he is hearing a lie. The deliberations in this area have been a much talked about topic all through the ages. One tries to conceal something with a convincing reason, as most humans aim at, and one also does it without a convincing reason if they are believed to be divine or super-human in some sense. In the latter, even though concealment is not really achieved, it is accepted that concealment has taken place, because the divine person wants that the matter be treated as concealed. Rhetoric and psychology of persuasion discuss various factors that go into the alchemy of truth and lie. Within the study of nonverbal communication processes we find that nodding, gesturing, leg and foot movements, immediacy, speed and frequency of talk, quantum of talk, quantum of errors and facial expressions such as smile are differentially exploited for the purposes of concealment via language. The truth value of a statement made via linguistic utterances, under circumstances of suspicion, is found related to the above variables. A deceitful speaker, generally speaking, nods and gestures less, avoids eye contact, exhibits less frequent leg and foot movements, does not get closer to the other, keep himself at a distance from the addressee, talks less and slower, with more speech errors. He also smiles more and inappropriately. There is something in his total face which reveals his complicity, his attempt at concealment while he makes a linguistic statement to the contrary. And yet a major problem is to decide with any certainty as to whether these features are directly related to his present misdemeanour or are derived from his remote past. Some do have personality problems and personal appearances which lead to the above listed features even in their normal communication. Through caste and other social institutions we cultivate certain stereotype notions against some social groups and these notions also



come to "guide" us in our recognition and interpretation of the concealment behaviour of individuals belonging to various social groups. On the other hand, the individuals who are suspected of concealing information begin to see themselves in the same way the others see them or expect to see them. Concealment via language, thus, is to be seen as a very complex phenomenon. Even the simple markers of concealment which we have listed as accompanying a linguistic statement and as revealing the deceitful nature of the communication made require careful and restrictive handling.

#### **4.5. Nonverbal Communication Via Paralanguage**

Paralinguistic characteristics are of two types. Features, such as junctures, stress and pitch are an integral part of a linguistic utterance and are sequentially linked with the linguistic utterance. That is, they occur with linguistic units, such as words and phrases; junctures distinguish clauses; stress and pitch occur within a clause, on words and phrases. Stress is the increase and/or decrease in loudness, and pitch is the rise and fall of fundamental frequency within a clause. These are all identifiable segments and spread over specific segments, such as words in a linguistic utterance. They are not dependent on any particular content; they are content-free. Another set of paralinguistic features are generally not segmentable and they stand on their own to signify individual contents. They are content-signifying paralinguistic features, include the organismic characteristics of the speaker, such as age, sex, state of health, fatigue, status in a group and/or in a social organization. Paralinguistic features also include laughing, giggling, snickering, whimpering, sobbing and crying, yelling, muttering, muffled sounds, and paralinguistic features are viewed by the speakers of a language

as revealing personality traits, personal qualities and emotional states. Of these, personality traits and personal qualities are ascribed by prevalent social values and the emotional states are dependent both on individual psychological states and social prescriptions. Both content-free and content-signifying paralinguistic features are exploited to reveal attitudes also. There is yet another category of features which accompany speech performance. These are disturbances in speech as well as supportive vocalizations of speech performance. These include sentence correction noises, sentence incompleteness noises, stuttering noises, interspersing of incoherent sounds, slips of the tongue, neologisms, transposition of words, substitution of words, omission of words, addition of syllables, inadequate pauses, repetition, too many and not so appropriate interjections, abrupt insertion of and/or switch over to other codes and so on. These paralinguistic features are taken from both content-free and content-signifying elements on the one hand and from language units proper, on the other hand. Uses of these generally signify the conflict in the speaker. While use of paralinguistic features is essential for a normal use of language (their absence will take the communication either excessively formal or abnormal) their excessive use indicates the collapse or impending collapse of language use in the speaker. The content-free paralinguistic features find some place in the orthographic systems of languages, whereas, of the content-signifying paralinguistic features, only a few are accommodated by way of punctuation marks in the written forms of communication. Some of the content-signifying paralinguistic features are of a universal type, whereas several others are culture-bound. The content-free and content-signifying paralinguistic features may be viewed as bases of human language communication.

#### 4.6. Silence as Nonverbal Communication

Silence is viewed differently by different scholars and different schools of thought. For example, the emergence of human language from the animal communication systems is viewed as breaking silence; this breaking silence, in this view, becomes a characteristic of humans, (Steiner, 1969): 'Possessed of speech, possessed by it, the word having chosen the grossness and infirmity of man's condition for its own compelling life, the human person has broken free from the great silence of matter'. Since all the values have been exhausted and since there is nothing new to be said or worth saying, silence is created/adopted (Steiner, 1969). Another view is to look at silence as a negative correlate of speech: if there is silence, there is no speech and if there is speech, there is no silence. Silence, in this view, is considered antithetical to speech; speech signifies expression and silence signifies lack or negation of information. In another view silence becomes an integral part of speech, since without interspersing it in speech, the speech becomes meaningless, incoherent, monotonous and unanalyzable. Silence then becomes a tool in the hands of speech, it is a handmaid of speech, without whose help speech itself cannot progress. In some other view, silence is information, and speech only a reflection of it. Speech is devalued since it is resorted to scandalously frequent and thus loses its information, whereas silence becomes the information; untouched and unprobed yet, silence becomes the refuge, for all information. In the beginning was word and man returns to word through silence, either by death or by tapas/meditation. In this view, then, one attains speech via silence. Silence is the basis of speech; silence is broken to create speech and silence is created to close speech -- an eternal cyclic process, symbolized and exploited

in most theological and mythical approaches to language. These assumptions have a sound basis in the patterns of human communication as well. Apart from this mutual dependence between silence and speech there are also communicative functions assigned to silence in nonverbal communication. These functions are operational both in the interpersonal transactions between individuals as individuals and in the interaction between individuals as members of social groups.

Silence includes hesitations and pauses as well as failure to produce speech. Silence may operate independently or it may operate in conjunction with other nonverbal means, such as eye and face. It may closely precede or follow an utterance by the speaker, created and maintained for the effect of the utterance by the speaker. Or silence could also be created several other ways in the hearers, and the silence thus created may communicate nonverbally many things.

The role of silence in communication could be viewed from the point of view of its functions relating to performance of speech, as well as from the functions of silence independent of speech. Speech is one of silence followed by utterance followed by silence. Within an utterance also, silence between breath groups, juncture and pause between sentences, apart from fulfilling the functions of units in a linguistic utterance, can be so modulated as to imply more. In any case, speech becomes comprehensible only if an adequate amount and frequency of silence is interspersed in the utterances made. Note that, just as several other features (prevarication and discreteness, etc.), silence is also brought into linguistic utterances to play crucial roles in the production, maintenance and comprehension of linguistic structures.

Hesitation phenomenon, which is considered

by us as part of silence, consists of a variety of pauses and serves several functions. Hesitation normally indicates the individual's state of mind and emotion as regards the content of message he is about to speak. The indecision as regards the manner in which the message is to be delivered also is revealed in the hesitation phenomena. Sometimes, for certain messages, hesitation phenomenon is chosen deliberately, as hesitation, then from the point of view of the speaker, is seen as the most appropriate form to convey the message. Reluctance, fear, speaker's own disbelief of the message he is to speak out, fear of consequences all influence hesitation. Hesitation is also socially warranted as a mode of showing respect to the content of the message and/or addressee.

Along with hesitation, a speaker may also utter interjections and make other noises which do not have the structure of linguistic utterances, although they have a phonetic manifestation. These utterances, such as *im*, *hum*, *ah*, *er*, *mm* and their repetitions signify the ongoing hesitation, silence. They also communicate the anxiety level of the speaker. Excessive resort to such utterances reduces the comprehensibility of linguistic utterances. Their occurrence and repetition reveal some speech disturbance. At the same time these pausal utterances are exploited by the speakers also to encode what they want to communicate in appropriate grammatical structures and words. Hesitations of these sorts enable the speaker to process his mental thought into proper words and grammatical structure, while impeding comprehension at the hearer's level.

In an interaction, conversation is carried on with comprehension, only if the individuals engaged in conversations take turns appropriately. In other words, if one is speaking, the other should remain

silent at least partly. This situation is not that simple a context as it appears to be. The conversation is carried on with speaking and silence, based on decisions as to who will speak and who will remain silent. This decision signifies status of individuals and importance of content, among other things. There are well laid criteria in many contexts within a language community as regards who would initiate the conversation by breaking the silence, who would maintain it, who would speak more and who would end the conversation. In some contexts, the person with inferior status breaks the silence and, in some others, the person with superior status does the same. A person in greater need always takes the initiative to break the silence. On occasions it becomes a sign of deference to remain or become silent because of the emotional situation in which the individuals are placed. Deep emotions are expressed by silence. Embarrassment is also expressed by silence. Silence becomes an effective mode to maintain secrets; silence, then, is considered secretive. Silence is used also to maintain distance between individuals. All these factors are nonverbal factors and these communicate the social status, and emotional status of individuals. Also note that apart from the silences that are demanded so as to carry out the conversation in a comprehensible manner, there are other types of silences, short, lengthy, frequent, abrupt and/or slowly progressing silences. A lengthy silence on the part of one engaged in conversation with another may signify that one is cautious and/or careful; a close emotional relationship between the two could also be signified. It could also mean snubbing the other. Between those who are in love, silence comes as a prelude to something more intimate, physical and/or mental. Glances with affection and changes in facial expressions precede or follow

this silence, whereas stare precedes or follows the silence when two are about to quarrel. Silence can also be used to hedge and to avoid confrontation. Noninvolvement and noncommittal position is yet another meaning communicated by silence. Anger is also communicated nonverbally by silence.

Silence can be used as a form of social control also. A person who has violated a social norm is treated or welcomed with silence. While "talking back", "report" and "rebuttal" are considered showing disrespect and/or disobedience in many Indian communities, even reply in certain contexts which involve matters on interpersonal relations between members of different sexes, interpersonal relationships between family members and on matters generally expected to be handled by the male spouse, even when a reply is by the speaker superior to the addressee, is considered as showing disrespect. While some of the latter contexts may be due to the separation of functions between members of a family, the addressee simply does not reply, even in areas generally approved as the rightful domain of the addressee, as silence is treated as concurrence/agreement and which, when broken through utterances, is treated as disrespect to the other. Thus, at one level, silence, when addressed, is considered as showing respect and response, and, at another level, is considered as showing disrespect. Silence is viewed a virtue in many Indian communities. Ultimate realization of God and supreme knowledge is by *dhyān* of which silence is an important vehicle, in religious practices. Thus, in more ways than one, silence receives importance as a means of communication.

## CHAPTER 5

### GESTURE

#### 5.1. What is Gesture?

Gesture is seen accompanying speech. Man makes gestures without speech also. Gesture is symbolic action by which a thought, a feeling or intention is voluntarily expressed in a conventionalized (established by general agreement/acceptance, or accepted usage) form. Gesture is different from the real act. For example, the real act of drinking when performed for a drinking purpose is action per se, whereas when the act of drinking is mimicked, or performed symbolically as in the case of Holy Communion in the Christian church, it becomes a gesture. The real act of smoking is action, whereas the movements that one makes as if one is smoking is gesture. In the examples given, there is some similarity between real acts and the "gestures" that indicate these real acts. There are very many instances in which gestures do not have any similarity between themselves and the acts or objects they stand for. For instance, in the sign language used by the Red Indians (American Indians), the sign for a laddle, which is made keeping the palm curved like a laddle, comes to denote drinking and from this meaning it ultimately stands for 'water'. There is no similarity between 'water' and this gesture. Thus, the gestures become not only



conventionalized but could also be holding a relationship of arbitrariness between themselves and the acts and objects they refer to.

Gestures are formed by movements of the facial muscles, head, limbs or body. These movements may express or emphasize a thought, feeling or mood. They may accompany speech or may be used in the place of speech as found among deaf-mutes, among people who do not know each other's language or among those who have taken a vow of silence and so on. In addition to their use as an accompaniment to speech and their use as an independent means of communication (in place of language) between individuals and groups, gestures are also frequently used in the aesthetic acts, in the theatre and dance, and in religious and/or secular ceremonies.

There are at least three major divisions -- use of gesture as an accompaniment to oral language; use of gesture by itself as the language, as in the case of deaf-mutes; use of gesture as an independent means of communication, an addition to the use of oral language, as in the case of sign language used by American Indians. There is also yet another category in which use of gesture either as an accompaniment to oral speech or as an independent system of expression is elevated to the aesthetic level and is exploited in aesthetic arts. Finally, use of gesture in all the above is resorted to for both social purposes and purely individual goals. Under social purposes, use of gesture for expression relates to establishment of interpersonal ranking, good manners, communication/communion with gods, maintenance of social identity, etc. The purely individual goals include maintenance and exhibition of the level of intimacy between individuals, secret communication, etc. While these are exploited at the aesthetic levels,

use of gesture itself in the aesthetic arts not only accentuates the effects but also creates and maintains the effects; in other words, it conducts the episodes in several cases.

Gesture is, indeed, present and exploited in every walk of human life. Poyotos' definition of gesture (Poyotos, 1975) brings out the salient features of gestures clearly: 'By gesture, one understands a conscious or unconscious body movement made mainly with the head, the face alone, or the limbs, learned or somatogenic, and serving as a primary communicative tool, dependent or independent from verbal language; either simultaneous or alternating with it, and modified by the conditioning background (smiles, eye movements, a gesture of beckoning, a tic, etc.)'.

Gesture is characterized in literature in very many different ways. Each one of these characterization focuses on one or the other aspect of gesture. Gesture is described as follows:

- 1) It is a silent language.
- 2) It is talk without talk.
- 3) It is mother utterance of nature.
- 4) It is natural.
- 5) It is universal.
- 6) It is figurative.
- 7) It is picturesque.
- 8) It has clarity.
- 9) It has picturesque novelty.
- 10) It is metaphorical.
- 11) It is poetic nature.
- 12) It is iconic.
- 13) It is pantomimic.
- 14) it is cheiromimic.
- 15) It is affective.
- 16) It is a surrogate for spoken language.
- 17) It is a substitute for spoken language.
- 18) It is a lexical ideograph.

- 19) It is speech by gesture (gesture speech of mankind).
- 20) It is visual language.
- 21) It consists of the visual attitudes of the soul.
- 22) It is innate language.
- 23) It is an air picture.
- 24) It is an essential adjunct to human language.
- 25) It is a great human accomplishment.
- 26) It is hand talk.
- 27) It is syntalk.

The body parts and other items of processes that are generally involved in the production and communication of gestures are as follows:

- |              |                     |
|--------------|---------------------|
| 1) Face,     | 15) Moustache,      |
| 2) Head,     | 16) Chest,          |
| 3) Eyes,     | 17) Breast,         |
| 4) Ears,     | 18) Place of heart, |
| 5) Skin,     | 19) Arms,           |
| 6) Breath,   | 20) Elbows,         |
| 7) Mouth,    | 21) Hair,           |
| 8) Lips,     | 22) Forehead,       |
| 9) Palm,     | 23) Throat,         |
| 10) Hands,   | 24) Nose,           |
| 11) Fingers, | 25) Legs,           |
| 12) Tongue,  | 26) Shoulder,       |
| 13) Chin,    | 27) Back, and       |
| 14) Cheeks,  | 28) Torso.          |

It is the upper extremities of the body that are more frequently used for the production and communication of gestures. Utilization of the back of the body is rare and when the back is used, the gesturer would turn and present the back to the one being addressed to make the gesture seen. There are at least three variables employed in the production of gestures involving these body parts. The body parts may be combined with one another or may be used singly. Some body parts are more frequently used and/or combined. Thirdly, the gestures are more generally produced clearly away from the

body rather than on the body itself.

Since gesturing is a communication mode, we find that animals also have some sort of gesturing mechanisms. From ants to highly developed vertebrates all exhibit the ability to produce and functionally use gestures. They make signs for various purposes: to mark their geographical territory, possessions, and even to communicate their 'mental' states. The wagging of tail by dogs of all kinds, signs by pointer dogs, the begging for food by various kinds of dogs, the signs made by cats, horses and other animals are all familiar to us. The dance of the bees for communication is another well known phenomenon. However, there is a qualitative difference between the gestures of animals and the gestures of humans. The gestural communication in the humans is a product of and a stage in the development of expressive motions. It is a specifically human product in several ways. The gestures in humans reveal a variety of complex structures which is not found in the animals. In the humans there is the simple indicative gesture with great many functions; there are both imitative and symbolic gestures, some very close to the shape or function of the object and event they denote and some very much removed from the object and event they connote. There is symbolic meaning, there is the extension of meaning of one gesture to another, there is also the internal extension of the meanings of a particular gesture; there is arbitrariness in addition to conventionality; there is also a 'syntactic' order governed by certain rules. All these are not found in the gestures of animals. The gestures of the animals are very much linked with their biological and routine needs, whereas the gestures in man, along with the biological and routine needs, are also elevated into a system fulfilling certain poetic and social functions in human life.

Gestures are as natural as human speech. They precede human speech in the ontogeny of language, coexist with human speech and continue to be in existence and use even when the human speech is lost in the individual. In their phylogeny, one finds gestures in some form or the other among all animals, performing the function of both individual and social steering mechanisms, and also gestures appear to have preceded vocal language in the phylogeny of communication systems. A child starts employing gestures much earlier than her use of language; the early stages of language acquisition does in fact consist in the acquisition of a variety of communicative 'gestures' that cannot be clearly distinguished as completely vocal. While vocabulary choice, in later years, is and could be taught, instruction in the comprehension and use of gestures is generally minimal, most societies taking these as more natural than speech and leaving these to be mastered unaware. Their (the societies') function is seen more in reshaping the 'natural' gestures, to keep these under some social regulation rather than teaching the gestures, per se. Regulation and suppression appear to be crucial processes in so far as the use of gestures is concerned. The child is governed in her early attempts at communication more by the gestures and facial expressions of the caregivers than by the vocal language of the latter. The gesture-like elements of oral speech, such as the tone of voice and intonation patterns, come to aid the child in its comprehension slowly. This recovery of information via gestures continues all through life, and where speech is proscribed, or is not yet made when the interaction begins between two individuals, or when the interactants are in difficulty to use speech, it is the gestural expressions that reveal the state in which the interactants are placed. In the most intimate moments, speech takes a back seat and gesture

has the total control. Also when an individual has not the particular word at his command at a particular moment in his own language, he resorts to gesture. He may resort to gesture for effects as well, even when he has the word. The foreign/second language learners and users, and those who are placed in an environment whose language they do not know or know only partly often resort to gestural communication, in a very natural manner. When a gesture is made more often than not, we tend to reply to it in some appropriate gesture, rather than in speech. We switch over to gestural communication, on our own, when we start conversing with the deaf and dumb. We may have never done it before; we may have never used gestures under such contexts, but, in spite of the novelty of situation, we do choose signs that are in some way concrete and picturesque. We try to interpret the sign language of the deaf-mutes also based on the assumed similarity of the outlines they make with the objects around and/or objects known to us. People disordered from their normal status or those congenitally disordered, and have disabilities of various sorts are also known to engage themselves in some sort of gestural communication. When individuals remain in solitary confinement, either voluntarily or by force, or by forces of circumstances, often start communication via gestures when they come out of their solitary confinement. The individuals who have lost their speech (the aphasics) are known to use gestures, however, for communication. Thus, there is some gestural communication potential in every one of us latent and ready to be used as and when the occasion arises.

Gestures are found in all the cultures and in all the stages of growth of cultures. Secondly, gestures are found used by the disordered people

also. Thirdly, even when the language is lost, as in aphasic conditions, people do use gestures for communication. Fourthly, gesture is used by the congenital deaf-mutes who are not exposed to language at all. Thus, gesture may accompany speech or may be used as a communication mode independently, and is found in all people. While gestural communication, thus, is found among all the people, social conventions regulate the quantum, quality, the frequency and contexts of occurrence of gestures. In some societies, gesturing is associated with lower social status; in some societies, if gesturing is not made, communication is not considered spirited and appropriate. Education and higher social status require measured tones, clear utterances, soft voice and less gesturing in many Indian societies. Imitation of another's idiosyncratic behaviour is allowed in the absence of the other for ridicule, humour and identity purposes. In the presence of the individual who is imitated, imitation is generally frowned upon especially when such imitations provoke laughter in others. Demonstrative gestures (indicating objects and individuals, who are placed away from the interactants) are avoided. Children are advised to avoid using gestures while talking. Man has assigned differential functions for both oral language and gesture in his communication activities. We shall see the details as we proceed. It is sufficient here to state that, in the humans, gestures get very much involved in the conduct of social behaviour.

## 5.2. Processes of Gesturing

When gestures accompany speech, they may or may not convey specific meanings. Many individuals have the habit of exhibiting gestures which may have no meaning in themselves or bear any meaningful relation to the utterances in speech.

These generally have the function of indicating that a speech utterance is in progress. These individuals will use some gestural movement or the other whenever they speak. A vast majority of us do this without ourselves being aware of the gestural motions we make. In another dimension, when gestures accompany speech, they may have the function of supporting the meanings conveyed by an utterance in speech or may even express a meaning which will be deliberately left out by the utterance in speech, to be expressed only by the gestural expression. Thirdly, a gestural motion or a series of gestural motions alone will form the 'utterance' in a communication, with speech playing no part at all, that is, the speech is absent and the communication is carried on only with and by the gestural motions.

In the categories where gestural motions do convey a meaning of their own, the processes of gesturing take several forms. We give below some of the forms that are generally identified in Indian contexts:

**1) Indication by gesturing at the object.** We point at the object, we indicate the cardinal directions, regions, body parts, colours, personal and demonstrative pronouns using this process. These objects are generally present everywhere. Indication is a very basic gesture and is a very useful and effective process for identification. This basic gesture is not found in most animals, perhaps because the gesture requires some cognitive identification skill, although the process of gesturing itself is made simple by the physical presence of objects indicated. Note further that both at the religious and social levels, gesturing at is very much regulated and kept under control. We have already pointed out as to how the socialization processes in Indian contexts insist on children producing their speech utterances without resort to gesture at objects they try to refer to in their speech utterance.



Gesturing at is taboo in certain ritual practices, whereas gesturing at is considered showing disrespect to the individual gestured at, at the social level of interaction. There is a parallel also in the speech wherein the superior is expected to be 'addressed' not in second person, but in third person, converting the pronoun of reference in the particular context into a pronoun of address. The second person pronoun has the function of gesturing at, indicating at the individual directly, whereas the third person pronoun has only the function of reference. Since gesturing at/indicating at is showing disrespect, even the speech utterances demand that a pronoun of reference (3rd person) and not a pronoun of address (2nd person) be used when the superiors are 'addressed'. This is prevalent in most Indian communities.

**2) Indication at or gesturing at the locality of occurrence.** For thinking we indicate at the head; for love, we gesture at the place where heart is located. In these cases gesturing at the supposed place of occurrence of an act comes to indicate the act itself.

**3) Outlining an object.** We draw the outlines of an object, or a part of the object by our gesture in air or on some surface. This gesture communicates successfully what is intended if both the interactants are already familiar with the object. There are also outlines drawn in a conventional and arbitrary manner which may not bear any similitude to the object in reality. In aesthetic arts a mix of both the categories is used. The same object may be outlined in different ways in different cultures; also the choice of the feature or features that will be outlined differs from one culture to another on the one hand and from one individual to the other within the same culture, on the other hand. Also note completion of the outline may or may not be required -- at times even a few steps in the outlining process will be adequate enough by which the other interactant would have fully comprehended the meaning of the outline in process. As already pointed out, one may either draw a whole

outline of the object in the air, or draw an outline of the characteristic part of the object. Even in the case of drawing the outline for the whole object, the outline drawn in the air may focus only on the characteristic shape of the object and not on all its details. The distinguishing marks will be focused even when the object is fully drawn. There is yet another subcategory within the process of outlining. A distinguishing part of the action is generally imitated and produced and this distinguishing imitation stands for the entire action.

**4) Imitation of action.** We may mimic or imitate the action, motion, etc., of an object. Beckoning with hands/fingers is made. The fingers/hands gesture to the individual addressed to come towards the individual making the gesture.

**5) Substitution.** A body part, for example, the fingers, forehead, etc., is used as substitute for the object. The index fingers are so placed on both sides of the head to indicate the horns. The forehead is so hung that it represents the trunk of an elephant. The left hand in a closed fist fashion is kept by the hip and the right hand, again in a closed fist fashion, is kept near the left hand to assume a posture of holding a sword and its sheath.

**6) Instrument imitation.** The imitation of the action performed with an instrument communicates the meaning of the action intended. We can imitate the sawing action to convey the meaning of sawing. Swinging the sword in a fighting posture, holding the flag aloft, plucking fruits or flowers all can be mimicked.

**7) Imitation of preparation process.** We can also imitate the process of preparation. Often the process of preparation of tea in a tea stall, in particular the manner by which the tea maker mixes the brew with sugar and milk, is mimicked in plays. Preparation processes of several other items such as bread, roti, pots, cloth are all indicated by appropriate gestures which exhibit

the processes at least partly.

**8) The imitation of taste.** By an appropriate facial expression, and exhibition of tongue, etc., the tastes are gestured. For example, the hot taste is gestured by keeping the mouth open and by letting the breath out through the mouth. While doing so the tongue is let hanging with a tinge of water. For the expression of sour taste, the cheeks are raised, wrinkles are made and the eyes are momentarily closed and opened. The teeth are also shown.

**9) Imitation of posture and other conditions through substitution.** We may indicate the height and the erect posture of the objects also. Erect index finger indicates a tall and erect object. An inclined index finger indicates leaning, falling, etc. We may imitate the condition of the object or the being. The size of the object is also indicated. All this may be done either by direct mimicry or by substitution. In the former we act out the state/condition directly. For example, to indicate an old man we may walk with a hunch, leaning posture, pretending to have a supporting stick in our hand. In the latter, the posture may be enacted by our index finger, in which the index finger comes to represent the old man by a process of substitution.

**10) Imitation of counting.** The processes of counting is imitated to gesture counting. The fingers in the left hand are touched by the finger/fingers in the right hand one by one to indicate the process. This gesturing is used to mean, not the actual numbers involved, but generally for the act of counting, and the overall numerous nature of/multiplicity of the act/object referred to.

**11) Comparison by gesture.** The relative position and movement of fingers are generally used for the purpose. The gesture by the gaps created between the two hands or fingers may indicate the size of the object. A tall finger by the side of a shorter finger will bring out the comparison; the heights may be indicated by the hands

one after the other giving a comparison. The rapidity and slowness of motion performed by the gesturing part also brings out a contrast in the motions of actions.

**12) Gesturing of repetitiveness.** Repetition of the same gesture several times indicates the action that may be performed more than once, in steps and/or in jerks. Rapidity or slowness of the repetition as well as the pauses in the repetition of the gesture also add to the demonstration of the repetitiveness of the action performed. Note that a similar technique is adopted in the spoken language in the production of utterances. In addition, the spoken language also employs the process of reduplication in which the whole or part of the word is repeated to demonstrate the repetitiveness of action. Repetition of the gesture, as well as the repetition of the word, is employed also for the collectivity of objects. When the gesture for an object is repeated several times, the repetition indicates that there are many objects of the same type; in other words, it indicates the plural number of the same object. This is usually achieved when the gesture is repeated, not in the same space, but in closely adjacent space of demonstration in the air. When the gesture is repeated in the same space with forward movements, it indicates the objects of the same species follow one another in succession, in a procession.

**13) Imitation and addition of distinguishing marks.** Along with the presentation of an outline one may also add certain distinguishing marks, marks that would certainly distinguish the present object of gesture from several other objects which may have some similar outline.

**14) Sounds.** Sounds can be used both as gestures in their own right and as an accompaniment of some other gestures, elucidating the meaning of the gestures they accompany. Snapping of the fingers and the clapping of the hands come under the first category whereas the sound that accompanies the gesture expressing the hotness of an eatable just eaten comes under the second category. The sounds of interjections also come under

the second category.

**15) Gesturing at place of occurrence.** In order to indicate the whiteness one may gesture at teeth.

**16)** In order to express complex ideas, the gesturer may combine one or more signs with another. This process is governed by several patterns: (a) A generic sign may be combined with a specific sign to bring out a combined meaning. Woman is expressed through a generic sign in American sign language. This is combined with the specific sign for begging to express the meaning for beggar woman. Likewise, attributes of a condition may be combined with a generic sign to express another meaning of the condition. The sign for woman is combined with sign for offspring to mean daughter. The sign for man is combined with the sign for offspring to indicate son. The designation of birds, flowers and plants also are expressed through combination of signs. Note that this feature of combining a generic sign with an attributive sign to derive new meanings is also found in oral language for several words, and in the kinship terminology. (b) While specifying a complex idea, the gesturer may use several signs indicating the several characteristics of the complex object/phenomenon. To mean the paddy field, the square of the field, water, walking on a bund, shortness of the plant may all be signed. (c) Origin or source, and the use of the object for the object itself. (d) Effects for causes. (e) Drawing of the form of the object and indication of its use. A good example in the American sign language is the sign for **hospital**, which consists of the signs for house, sick and many. (f) Another method is to draw the outline of the object and indicate the place where it is found. Horns drawn on the head gestures an animal. The outline drawn in the air of the forest and the dancer making the movements characteristic of the deer indicate the deer in the jungle. (g) Shape and one or more specific marks may also be used. (h) Way of using and specific marks of the objects. (i) Another combination is shape, mode of using and specific marks. (j) End for which an object is used, or its make, and the place where

it is found. (k) Place and specific mark. (l) Place, manner of using, or mode of arrangement. For example, the pantomime of putting on shoes or stockings indicates those articles. (m) Negation of the reverse. Fool-no is wise; good-no is bad. (n) Opposition. A principle of opposition as between right and left hands, and between the thumb and forefinger and the little finger; between loudness and softness; between rapidity and slowness; between continuity and interruption/faltering and hesitation, etc., operates in the signation of complex ideas as well as in depicting dynamic (mobile) objects/events.

### 5.3. Oral Language and Gesture Language

We have already classified gestures into four major categories based on the contexts of their occurrence: (i) Occurrence of gestures designating that speech is in progress, (ii) Occurrence of gestures as a meaningful accompaniment to speech, (iii) Occurrence of gestures as an independent means of communication whether the individuals have speech or not, and (iv) Occurrence of gesture in the deliberately elevated levels of performing arts. Note that, in all these categories of occurrence of gesture, even where gestural communication is sought to be worked out as an independent means of communication as found among the Red Indians or Australian aboriginals or among the deaf-mutes, there is always some correspondence maintained between speech and gesture language. While in the former the correspondence is manifest very often, in the latter, the institutional languages of the deaf-mutes are based on oral speech around them and are comprehended as such even by the deaf-mutes in course of time.

Even where societies insist upon less gesturing as decent manners, we find that the individuals, when excited, make use of their hands in gesturing postures, whether such gesturing has any meaning

or effect for the addressed. We clap our hands for approbation, rub the hands in delight, go on manipulating fingers while in a fidgety state, wring our hands in distress, raise it in wonderment and astonishment, snap the fingers for calling attention of the other, use the palm of the right hand for blessing, with index finger erect and other fingers of the right forming a fist, we warn others, we shrug the shoulders for showing that we are not responsible, we wink at others in collusion and glare at others and exchange meaningful, understanding and conspiratorial looks and connivance. We raise our brow in frown and in wonder, use our fist to threaten and raise the hand with the fist to convey solidarity; we bite the lips to acknowledge our errors and in vexatious circumstances, fold the palms to greet the others and pray to gods, fall flat on our stomach with hands stretched over the head, and legs also stretched out to surrender ourselves to the one before whom we fall flat; we bend our knees and worship. In this manner we speak also through gestures -- while the oral language has a sway over our communication efforts, there are niches which are specifically meant for nonverbal communication, and gesture is an integral part of this process. We use gestures for many purposes -- to promise, call, dismiss, threaten, supplicate, express abhorrence and terror, question and deny; express joy and sorrow, doubt, confession, repentance, measure, quantity, number and time; gestures are used by us to encourage, console, restrain, convict, admire, respect and condemn. The list is, indeed, an open-ended one. There are communities in which gesturing as an accompaniment of speech is demanded; in most Indian communities, gestureless speech is "lifeless" speech, dispirited; it indicates non-involvement and reluctance; it may also mean insulting and showing disrespect to the addressed. Also in all human societies where noise is to be

avoided, oral language gives place to whisper and/or gesture. Thus, the relationship between oral language and gesture is one of complementary distribution of emphasising the content of what is stated in oral language, of supplying what is left out in oral speech, and of indicating and conducting the oral speech itself.

While the ordinary language can be used in its written medium even when the addressee is absent, performance of gesture requires an audience. Even when the addressee's attention is distracted, oral language does and could reach the addressee, whereas for gesture language to be effective the attention of the addressee is essential. Gestural communication cannot be resorted to in the dark, whereas oral communication is possible in the dark. Gestural communication can be employed when voice cannot be or is not desired to be employed. When secrecy is desired gesture communication is resorted to. When silence is desired or required, gesture communication is exploited. Where the ear cannot but the eyes can reach, gestural communication is found effective. Human language, through its writing medium, can convey messages, to distant places and future times. While the gestures themselves and the mechanics of gesturing can be and are transmitted from one generation to another, transmission of contents via gestural communication from one generation to another is generally restricted to aesthetic acts only and not for other types of knowledge.

Oral speech and gestural communication differ in terms of the parts engaged in their production. Whereas the oral speech is produced manually, this manual production of speech is different from the manual production of gestural signs. In the case of gestural signs, the medium is manual in the sense that manipulation of hands, fingers,



palms, elbows and other body parts is made. The choice would differ from region to region, from society to society. In the case of oral speech, uniformly the speech is produced by vocal organs and is mostly egressive (produced with the help of breath of air sucked in through the mouth to the lungs). There have been attempts, however, to compare and relate the speech production mechanisms with the mechanics of gestural communication. For example, Ljung (1965) makes the following comparison: 'In sign language articulation, the analogue of the movable articulator in speech (the tongue) is the hand or hands. These may adopt several basic shapes: open, clenched, one or more fingers extended with the others closed, one or more fingers curved, etc. No other part of the body is used as an articulator: even the rare full arm motions are accompanied by a distinctive hand gesture, and signs for actions characteristic of the feet, such as walking and dancing are made with the hand. The hands may be used in a stationary position or moved up, down, forward, back, to the left, to the right, in concert, parallel to each other, or crossing over each other. Motion may be distinctively rapid and tense, slow and lax, or neither; proceeding, again distinctively, in straight lines, through curves, in circles, trembling or wagging from the wrist. The analogue of the place of articulation in verbal speech (for example, the palate, the upper teeth) is the point at which a gesture is made or to which the hand moves during the gesture. In most cases, the place of articulation is a place on the signer's own body; head, hair, forehead, ear, eye, nose, upper lip, mouth, chin, chest (heart), lower arm, leg, etc. Utilization of the back of the body as a place of articulation is rare, both because of its general inaccessibility to the articulator and because of its invisibility to the interlocutor. When this part of the body is used, as in the sign for tail,

the signer must turn so as to present his profile while signing. The place of articulation is often not actually touched; instead the hand is only brought into close proximity to the relevant body part. When the place of articulation is not a part of the body, it is somewhere in the space nearby, as in indicating a height in front of the body in the sign for *child*. Signs are generally formed in a continuous flow, but sentences and longer segments of discourse may be set off by brief pauses, when the hands and arms are dropped to the speaker's sides or lap or are used for some other nonsignalling purpose'. Those who are familiar with the description of the processes of speech production in humans will find in the above passage a close parallel between the processes of sign production and speech production. This parallel between the production of signs and production of speech has been sought not only in the phonetic level as given above, but also in the other levels of human language, such as phonemics, morphemics and syntax. Even when parallels in the processes are not attempted to be established, it is assumed that the only way to describe gestural communication is to use the concepts that are employed in the description of human language. This point will be taken up further below. However, it is pertinent here to point out, especially since we have above presented a point of view which claims a parallel between the processes in the production of speech and gestures, that the sign language communication does not really have much of the characteristics of phonetic script (discreteness) as we find in human vocal language. It is more or less similar to an extreme form of ideographic writing. But even in the latter there is more discreteness than in the gestural communication. The gestural communication has a large pantomimic element and has the directly representational characteristic which is rather absent in vocal

language. All the same gestural communication is not also a language of pictography which we find in Early Man's caves wherein pictures were reproduced for communication purposes. There is also an element of arbitrariness in gestural communication which is qualitatively lacking in Early Man's pictographic writing of various sorts. In the gesture language there is a transfer from actual objects to symbolic objects such as an erect index finger standing for man (Mallery, 1880). Conventionality of this nature is not always found in picture writing. Moreover, picture writing could be both communicative on the one hand and decorative ritual and ceremonial on the other hand, whereas gestural act as normal human communication is communicative and is used as such with the intent to communicate.

In oral speech there is hierarchical and systemic organization of the elements that are used in speech. Such a hierarchical and systemic organization is not found in the sign language, even though several studies have attempted to demonstrate such a hierarchical and systemic organization (for example, West, 1963). Gesturing is more like a telegraphic system of writing (but without any conventionalized 'sentence' consciousness). The gestures are, more or less, independent 'words' used either as words in a 'construction' consisting of several gestures interlinked with one another in some sense, just as morphemes in a sentence in vocal speech are interlinked with one another, or independent 'sentences' by themselves. The gesture communication system operates only on one level, say the level of morphemes or words or content words, rather than on a system which incorporates within itself several systems. For example, the sounds in a language can be viewed as constituting phonemes at another level. The phonemes go into the making of morphemes

(minimum meaningful units; the word *dogs* has two morphemes, *dog* and the morpheme *-s* meaning plurality of the object). Morphemes go into the constitution of words and the words into sentences and sentences into a text. While each level/state/unit is related to the other, each of these could still maintain itself as some sort of a self-contained system. These combinatory characteristics/systems, one built upon another, are not found in gestural language, although there are several significant findings to the effect that gesture communication, like human language, is also a system of systems (West, 1963). Note also that the elaboration and categorization of linguistic units based on their co-occurrence conditions are not found in gestural communication. That is, theoretically speaking, one gesture is combinable with another gesture more freely than one word with another. Thus, the gestures cannot be generally divided into categories based on their co-occurrence behaviour, such as verb, adjectives, adverb, noun, etc., in any strict manner. Also a gesture which is viewed as a subject in the grammatical sense in the human vocal speech could be both subject and predicate within the same "gestural sentence". To split a series of gesture, or to do a parsing of series of gestures produced is, indeed, a difficult process since what is a 'subject' in a gesture sentence could be the object simultaneously of the immediately preceding gestures.

Like the words in the oral language, one could attempt to decipher the meaning of a gesture based on gestural and nongestural contexts. And yet the gestures are more transparent than the words in the sense that in many cases the gestures directly represent objects/events and these have in some sense less arbitrariness about them. We have, in the earlier section, elaborated the close linkage between the objects and events in the

external world, and the gestures. The gestures become symbolic transfer of the objects and events in the external world, but, even when some of the gestures are purely arbitrary in some gestural symbols, there is some physical similarity in the shape, size and motion of the gestures produced, thus revealing the lack of the characteristic of arbitrariness in a vast majority of the gestures produced and used. We have also referred to the pantomimic nature of majority of gestures used in communication. This fact also reveals the limited nature of arbitrariness found between the gestures and the objects and events in the external world. There is a clear separation in vocal speech, in most cases, between sound and sense, and this separation is not found to the same extent between gesture and the object or event it represents. Gestural communication makes greater use of iconicity and this enables individuals who do not know each other's language to communicate with one another using gestures. There are several words and constructions in the oral language also which are figurative, outlining the objects, imitating the events and pantomiming the whole episode of communication. There are also words which focus on only one aspect of an object but lead to the comprehension of whole object or event. Onomatopoeic words in vocal speech clearly indicate linkages between the external world and the linguistic words. In this sense, onomatopoeia in natural languages comes somewhat closer to gestural communication. And yet these onomatopoeic words are also built upon the elements of both arbitrariness and conventionalization. These also exhibit cultural variation. The link between the external world objects and events, the onomatopoeic words in a human language exhibit more arbitrariness than we find between the iconic gestures in gestural communication and objects and events in the external world.

The scope and size of the gesture lexicon is very much limited. The referents of gesture communication are much less than the referents of spoken language in all human societies. It is unlikely that all concepts found in speech could be expressed in manual gestures with ease, precision and effectiveness. It is but natural that when conversion of information from one medium to another medium is attempted, there is both loss and gain of information, effectiveness, ease and precision. Hence, there cannot be complete correspondence retaining all these features when conversion takes place or is resorted to. So, when speech is sought to be converted into gestures, naturally there are changes made in the nature and quantum of information.

The gestures that accompany speech and the gestures that stand for words in a stretch of oral utterance are generally more limited in their quantum and breadth of semantic coverage than the gestures that are employed independent of oral communication. Even in this latter category whether the gestures are used in addition to oral language as in the case of the aboriginal sign languages used by Red Indians or by the Australian aborigines, or the gestural communication is resorted to as *the* means of communication as found among the deaf-mutes, only a few thousand signs have been found to be in use. Washburn, as quoted in Taylor (1978), finds 750 signs to be basic signs and others derived. Fant (1964), as quoted in Taylor (1978), considers that out of the several thousand signs that are used by the Red Indians, etc., only 500 signs are basic. In normal oral language communication also, estimates fix the basic vocabulary anywhere from 850 words to 1500 words. Thus, the basic words and basic signs in both oral language and gestural communication appear to be not very much different in

their quantum (West, 1963). However, the quality of human language lexicon, as a system, is much more open-ended and incorporates the essence of entire language not only in terms of vocabulary items but also in terms of the rules of grammar. Human language lexicon is the microcosm of all that is found in human language -- the rules of formation, derivation, inflection and use. This microcosmic element is still elusive in gestural communication.

While in the spoken language we could converse more or less with equal ease upon all topics (the medium itself does not constrain the expressions of any topic, but rules of social competence and performance do constrain the facility), in the case of gestural communication, the medium in several cases does not lend itself easily for the expression of certain contents. For example, 'spatial relationships, physical activities, enumeration, specification and comparison are easily expressed. Animal names and descriptions of their characteristics and movements are abundantly represented. Frequent also are personal and place names. Plants and shrubs are little represented as named species, and other terms for non-living nature are also relatively few in number. Difficult to express are cause-and-effect statements, and emotive and evaluative terms are scanty. True synonymy seems to be rare' (Taylor, 1978).

Note that words as well as gestures can and do change their meanings (in terms of their implications, if not their literal meanings) from context to context. However, there is no one to one correspondence between a gesture and a word. A single word may express an idea which is complex and which can be communicated only by a battery of gestures. Likewise a single gesture may signify an idea which can be communicated only by a

battery of words. Also note that in a human language the use of words is often marked by a syncretic understanding of what they stand for. Although a word is uttered more or less alike and may have an overall meaning shared by all those who use that word, the focus or the feature of a particular object or event meant in a particular context by individuals may differ. Furthermore, one may even use a word without fully understanding the meaning of that particular word. On the other hand, one cannot use a gesture in communication without understanding what the gesture stands for, when one wants to communicate through the use of that gesture. Even the most familiar and appropriate of signs to the objects or events being gestured cannot be understood by the others outside the context. 'Successful signs must have a much closer analogy and establish a concord between the talkers far beyond that produced by the mere sound of words. The merely emotional sounds or interjections may be advantageously employed in connection with merely emotional gestures, but whether with or without them, they would be useless for the explicit communication of facts and opinions of which signs by themselves are capable' (Mallery, 1882).

Gesture lexicon is spontaneous and use of gestures in our Indian societies is not much conventionalized in interpersonal communication, in the sense that one could easily identify more numerous idiosyncratically performed gestures than conventionally agreed upon gestures and that avoidance of gestures is generally desired. Gestures are elevated to aesthetic arts wherein there is both conventionalization and arbitrariness. Both these features are kept to the minimum in the gestures made in interpersonal communication contexts. In other words, the interpersonal communication in most Indian communities does



not institutionalize gestural communication and leaves them to the idiosyncratic and less consciously executed modes of expression. As such, the gesture lexicon is not as elaborate as that we find among the Jews, or among some European communities. This does not, however, mean that we do not use gestures at all or that there is no conventionalized and institutionalized gesture lexicon in most Indian communities. It only means that the quantum is of a limited number and its use is also relatively more limited and fixed.

Gestural communication is generally conceived to be a substitute for speech. We have already referred to the facts that gestural communication is often resorted to in contexts wherein oral communication is to be avoided for various reasons; that gestural communication often accompanies performing a supplementary role to oral communication. In the case of the Red Indians sign language takes on the role of a language for inter-tribal communication and for communication with those who do not know their language. It takes on the role of a ritual among the speakers of the same oral language. In all these cases and in aesthetic arts level also, the power to interpret, and sharpen further the gestural communication lies with the oral language. Even in the case of the deaf-mutes, once institutionalization of their gestures takes place, their gestural communication is placed upon the foundations of oral speech of others. The concepts represented by gesture are already there in the human language in almost all the cases, and these concepts (even if their origins are rooted in an overall ability for communication and not simply on a propensity for *language use*) come to be based on concepts developed and used in vocal language as soon as there begins a contact between gesture communication and language use. Often, in the case of

normals who habitually use oral language for communication, gestural language becomes a conversion from the spoken medium to a silent medium of gestural motions, with several underlying processes and motivations. There is pure gestural language, a manifestation of prelinguistic thought in early childhood; it is nurtured into an art in several directions, sometimes for interpersonal and intergroup communication as found among the Red Indians and Australian aborigines. It also matures into an effective medium for performing arts. There is also non-language gestural communication as found among deaf-mutes on the one hand and other congenitally disordered population which could be made with some difficulty, to be in consonance with vocal speech; it could also be regulated by vocal speech. There is also post-language gestural communication in which gestures may accompany oral language in a supportive role. There is yet another post-language gestural communication in which language is totally, or in some severe fashion, lost and the affected is led to the use of gestural communication.

Unlike the oral language, there is less generalization and abstraction in the gestures used. While the oral language is characterized by concatenation, gestural communication is characterized by a use of more than one means. Concatenation is used, but rather in a loose fashion; apart from concatenation of gestures, vocal signs may also be interspersed. Also apart from hands, other body parts also may be used. And feelings, emotions expressions on face also may be used. Thus, there is a multidimensional exhibition of signs in gestural communication, whereas in oral communication, communication via the vocal organs occupies the centre stage. Also note that the concatenation of the sign language is of a varying type. As already pointed out, the order in which gestures

occur in a communication (wherein only gestures are used, for instance, in the Red Indian sign language or in the gestural communication of the deaf-mutes) is not uniformly followed by the same individual using gestural communication. Furthermore, each gesture can act as an independent sentence in the sense that it communicates a complete sense, having subject and predicate implied by the same sense. In a series of gestures, a gesture may be the subject of a following gesture and it could also be the predicate of a preceding gesture. There is also a different view which finds some order in the occurrence of elements in gestural communication. For example, Taylor (1978) suggests for the Red Indian sign language the following order of occurrence of elements in an utterance: 'topics precede qualifiers and complements (nouns precede modifiers and verbs); logical objects precede or follow their governing sign, the exact position in each case possibly being idiomatic; obligatorily the sign for question begins an interrogative sentence, and the sign for negative follows directly the sign it modifies'. Taylor also finds some order in the formation of a word sign in the Red Indian sign language: 'Words in sign language consist of from one to several sign morphemes. When two or more sign morphemes function together as a word, it is highly characteristic that the first morpheme announces a topic, which is then followed by comments about the topic that become progressively more specific and that eventually define it. Negro: Whiteman + black; infantry: Whiteman + soldier + walk; sister-in-law: brother + possess + wife; bachelor: man + marry + no; cheat: lie + steal'. Taylor further points out that the order of constituents in a 'word', that is, in a gesture word, is generally fixed. The order of words in the sentence, on the other hand, is fairly, though not totally, free'. There are variations in the order,

'but when the variations were resubmitted to the informant at a later time, he often rejected some as substandard or meaningless, thus indicating that there are preferred word orders'.

We have given, in the above lines, some salient features of vocal and gestural communication and their inter-relationships. We have presented a general overview of the features without distinguishing between systems of sign communication that operate almost independently of oral language and those systems of gestural communication that depend on oral backdrop and accompany oral speech. There appears to be some differences between the two when we investigate the matter in terms of their internal organization, the choice and combinatorial possibilities of occurrence of gestures. For example, although the aboriginal sign languages exhibit both natural and conventional sign relations, iconic and indexical elements are found to be exploited more than the symbolic relations by them, in comparison to the oral language which exploits symbolic relations more than the iconic and indexical relations. Since one of the important reasons for the emergence and retention of sign languages as an independent system along with oral language is their usefulness in communicating among those who do not know each other's language, the sign languages are more flexible in accommodating new signs for the repertoire of the interactants. It has been reported that the Red Indians were in the habit of imitating the gestures of whitemen even if the latter were performing the signs wrongly and/or interpreting their (Red Indians' gestures) incorrectly. Communication rather than correctness of gestures appears to be an important motivating factor in the conduct of sign languages. On the other hand, in performing arts, correctness, elegance and spectacle dominate the use of gestures.

We may conclude this section by giving two important features of the inter-relationship between spoken language and sign language presented by Umiker-Sebeok and Sebeok (1978). One is on the intersemiotic translation from the spoken language to sign language and vice versa: 'There is transmutation or intersemiotic translation, which is the interpretation of verbal signs by means of signs of nonverbal sign systems'. Umiker-Sebeok and Sebeok (1978) suggest that this intersemiotic translation is to a certain extent a barrier to attainment of fluency in the use of sign language. Note that this, indeed, is a factor in attaining fluency in the second/foreign language. To the extent one is occupied with the transmutation of the utterances of one language into another, the fluency in the target language is always affected, and is often defective as well. 'The greater the degree of conventionalization and standardization and the less the individual signer has to rely upon translation from spoken language, the greater the fluency of sign language performances'. Another point is that Umiker-Sebeok and Sebeok (1978) suggest that we look at the use of sign language along with spoken language as similar to the use of illustrations in written texts. In written texts, illustrations have very many functions to perform. In a broad, general sense, an illustrator is always dependent on the author; all aspects of the illustrations should also be textually accurate. But in most cases we find this not to be so. There is always a dialectic, antithetical relationship between the author's work and the illustrator's work, so long as the illustrator also assumes some creative role. Even, if he does not assume any creative role, and wants to be thoroughly faithful, the level of his understanding of the author's work and the actual processes of semiotic transmutation, transfer from one code to another, automatically brings in variation (Thirumalai, 1984).

#### 5.4. Schools of Gestural Communication

Gesture as a form of communication has been studied for a long time. Explanation of the process of gesture is of great antiquity. Gestures were considered to be an effective accompaniment of rhetoric by the Greeks and Romans. They form an integral part of study and performances of performing arts all over the world. In Indian Theatre, for over 2000 years, insightful analysis of use of gesture has been made. There are theories that gesture preceded human language. There are also attempts to codify gestures, prepare inventories and develop independent communication modes using exclusively gestures.

If in the Western sciences there has been some sort of continuity of interest in the study of gestures from the Greco-Roman times to Darwin and present day sciences and its elevation to art, in Indian culture we find that gesture has been elevated in ancient times to aesthetic levels on the one hand and has been exploited for social identity, ranking and status purposes on the other hand. Thus, gesture in Indian contexts finds a place in purposive communications in a marked fashion, in the aesthetic arts, in religion, in sculpture and in interpersonal and social group communication. Use of gesture is marked by a continuity ensured by their use in arts. We shall see all these subsequently in this section. However, the primary purpose of this section is to present a few modern Western approaches to the study of gestural communication. The contributions covered are those of Col. Mallery, Wundt, Efron, Poyotos, and Ekman and Friesen.

##### 5.4.1. Mallery and Sign Language

Of the several studies on gestural communication

in the past, the studies by Col. Garrick Mallery stand out as the most important contributions to an understanding of gestural communication in general and Red Indian sign language (Plains Sign Language of the American Indians) in particular. Mallery's major contributions are reprinted and available in Umiker-Sebeok and Sebeok (1978). Writing on Red Indian sign language over 100 years ago, Mallery brought in several insights into the study of gestural communication. His study, according to him, is intended to be an exposition of the gesture speech of mankind, thorough enough to be of suggestive use to students of philology and of anthropology in general (Mallery, 1880). He also compared the sign language used by North American Indians with that used by other peoples and deaf-mutes (Mallery, 1882). In the past, during Mallery's time, the major emphasis was on the collection and description of signs used by various American Indian communities. He found that 'many of the descriptions (of signs) given in the lists of earlier date ... are, too curt and incomplete to assure the perfect reproduction of the sign intended, while in others the very idea or object of the sign is loosely expressed, so that for thorough and satisfactory exposition they require, to be both corrected and supplemented, and therefore, the cooperation of competent observers, to whom this pamphlet (Mallery's 1880 work) is addressed, and to whom it will be mailed, is urgently requested'. The publication is 'a collection; in the form of a vocabulary, of all authentic signs, including signals made at a distance, with their description, as also that of any specially associated facial expression, set forth in language intended to be so clear, illustrations being added when necessary, that they can be reproduced by the reader. The description contributed, as also the explanation or conception occurring to or ascertained by the contributors, will be given

in their own words, with their own illustrations when furnished or when they can be designed from written descriptions, and always with individual credit as well as responsibility. The signs arranged in the vocabulary will be compared in their order with those of deaf-mutes, with those of foreign tribes of men, whether ancient or modern, and with the suggested radicals of languages, for assistance in which comparisons travellers and scholars are solicited to contribute in the same manner and with the same credit above mentioned ... Intelligent criticisms will be gratefully received, considered, and given honorable place'. The above quote clearly indicates the scope and methodology Mallery adopted in his work. Mallery's methodological soundness was not matched by any other contemporary scholar of his; most of his contemporaries engaged themselves in the collection and description of signs. Mallery went beyond everyone and offered several theoretical insights as well as structural descriptions of the general processes of gestural communication, most of which have been adopted as the basis of later research in the discipline of gestural communication. Mallery's classification of signs, and the identification of elements and movements that constitute signs in North American Indian sign language have been generally repeated in almost all works with some changes in order and terms, until the influence of modern structural linguistics was brought to bear upon the study of sign language by scholars beginning with A. L. Kroeber. Even with the influence of modern structural linguistics on the study of gestural communication, the basic concepts of Mallery and his approach towards the study of sign language continue to exhibit a modernity even today. For, in essence, Mallery had a comprehensive view of what communication is.

Mallery recognizes the superior generalizing



and abstracting powers of oral language, while emphasizing, at the same time, that gestures could excel in graphic and dramatic effect applied to narrative and to rhetorical exhibition. Mallery presents an insightful analysis of the inter-relationship between oral and sign languages, and points out the mutually exclusive and mutually complementary areas of their use. Their relative merits as modes of communication occupy a great deal of his work. Spoken language can be interpreted only by another spoken language, whereas gestural language does not require such interpretation. Gesture speech cannot be resorted to in the dark, nor can it be resorted to when the attention of the person addressed has not been otherwise attracted. However, when the voice would not be or shall not be used, gesture speech can be used. When highly cultivated, the rapidity of gesture speech on familiar subjects exceeds that of speech and 'approaches to that of thought itself'. Oral speech is wholly conventional, whereas gesture speech is both natural and conventional. Mallery, however, finds that there is 'no need to determine upon the priority between communication of ideas by bodily motion and by vocal articulation. It is enough to admit that the connection between them was so early and intimate that the gestures, in the wide sense indicated of presenting ideas under physical forms, had a direct formative effect upon many words; that they exhibit the earliest condition of the human mind; are traced from the farthest antiquity among all people possessing records; are universally prevalent in the savage stage of social evolution; survive agreeably in the scenic pantomime, and still adhere to the ordinary speech of civilized man by motions of the face, hands, head and body, often involuntary, often purposely in illustration or emphasis'.

Signs are originally air pictures of the outline

or chief features of the objects. In course of time this similarity may be lost and the signs become abbreviated (become arbitrary) and conventionalized. With the growth of conventionalization and arbitrariness and with groups choosing different and varied features of the same object or event to produce signs for the same object or event, variations between signs and sign languages increase and difficulty in communication using the sign language as a medium increases. However, the elements of the sign language are natural and universal in the sense that there is a general system, instead of a uniform code. This general system admits generic unit while denying the specific identity of signs employed -- 'the common use of sign and of signs based on the same principles, but not of the same signs to express the same ideas, even substantially' marks the universal characteristic of sign language. Mallery also divides the signs into innate (generally emotional) and invented; into developed and abridged; into radical and derivative, and into indicative (as directly as possible of the object intended), imitative (representing the object by configurative drawing), operative actions, and facial expressions. Mallery also brings in notions from grammar and prosody, such as tropes of metaphor, synecdoche, metonymy, and catachresis. Another classification is formal, into single and compound, which Mallery considers as the most useful distinction.

Mallery also distinguished between signs and signals, signs and symbols, and signs and emblems. Signal is some action or manifestation intended to be seen at a distance. This does not allow for minute details (and as such symbols may have a form and structural complexity different from signs). Signals are executed exclusively by bodily action and also using some object as implement. They may also be executed by various devices,

such as smoke or fire across. The symbols are mostly conventional. Mallery suggests that symbols are less obvious and artificial than signs. Symbols need convention, and are not only abstract but also metaphysical. They also need explanation from history, religion and customs. On the contrary, signs, as viewed by Mallery, do not possess these characteristics. Emblems do not require that there be any analogy between them and the objects; these may be simply accidental.

Mallery finds that the sign language/gesture utterance presents no other part of grammar besides syntax. Syntax of sign language is the grouping and sequence of its ideographic pictures. While in the oral language meaning does not adhere to the phonetic representation of thought, in the sign language it adheres to signs. In the gesture language there is no organised sentence similar to ones we find in oral language. There are no articles, grammatical particles, passive voice, case, grammatical gender, not even the distinction between substantives (nouns) and verbs. Nor is there a distinction between subject and predicate, qualifiers and inflections. The sign radicals have the characteristic of being everything, 'without being specifically any of our parts of speech'. Mallery also suggests that this state of conditions offers an interesting comparison with the syntax of vocal language of early humans.

In the analysis of sign language syntax, we must consider, according to Mallery, both the order in which the signs succeed one another and the relative positions in which they are made, 'the latter remaining longer in the memory than the former'. The order of occurrence of signs shows the natural order of ideas in the aboriginal mind and 'the several modes of inversion by which they pass from the known to the unknown, beginning

with the dominant idea or that supposed to be best known'. The sign language gives first the principal figure and then adds the accessories successively. The expressions follow the order of ideas, according to Mallery. He also suggests that signs do not represent words, they do not even suggest words, for 'a simple word may express a complex idea, to be fully rendered only by a group of signs, and *vice versa*, a single may suffice for a number of words'.

One of Mallery's chief contributions lies in his focus on the relationship between gesture and oral language in their phylogeny. In his view there was a time in which Man had no oral language but only gesture language. Oral language evolved, among other things, from the primordial roots of gestural communication. Although people can speak without pause in their own language without a single gesture, speech has not eliminated the need for gesture. 'The signs survive for convenience, used together with oral language, and for special employment when language is unavailable'. Another characteristic is that the signs may be understood even when they are produced for the first time. While these facts reveal the inter-relationship between, as well as the common phylogeny of gesture communication and oral speech, it is also true, Mallery suggests, that there is a progression away from the use of gesture language in societies materially more advanced. (This is not what Mallery exactly says but one could safely arrive at this implication.) Thus, Mallery proposes that 'the further a language has been developed from its primordial roots, which have been twisted into forms no longer suggesting any reason for their original selection, and the more the primitive significance of its words has disappeared, the fewer points of contact can it retain with signs'. The subsequent grammatical studies of American

Indian languages have shown that these languages do have a very complex grammar and as such Mallery's suggestion that in the American Indian languages 'the connection between the idea and the word is only less obvious than that still unbroken between the idea and the sign', and that these languages are 'strongly affected by the concepts of outline, form, place, position, and feature on which gesture is founded, while they are similar in their fertile combination of radical', is not supported by linguistic research. All the same the position of Mallery as regards the ancestry of gesture communication as the progenitor of oral language and his position that there may be a correspondence between advancement of material culture and reduction in use of gestures are still wide open for further investigation.

#### **5.4.2. Wundt and Gestural Communication**

For Wundt, sign language is simply a primitive form of ordinary language and as such it may reveal something of the essential nature of natural language. Also gestural systems might uniquely reflect characteristics of the innate human language capacity. Wundt also suggests that gestural communication is a kind of universal language in spite of varied gestures and conditions. Because of this universal nature people are able to understand one another when they make use of gestures without great difficulty. There is a tendency among people to combine word sense with affective expressions even when speaking the same language and also to resort to gestures when they interact with other people who do not know their language. The growth of the spoken word had its impact in the development and preservation of gestures. Gestures are formed based on emotion, affective tendency, and temperament. Although different conditions of culture may have some influence

on the formation and use of specific signs, these do not alter the character of certain concepts such as I, you, he, here and there, large and small, sky, earth, clouds, rain, walking, standing, sitting, hitting, death, sleep, etc. The universal nature of gestural communication must be sought in these characteristics.

Wundt identifies two basic forms of gesture, namely, demonstrative and imitative. The demonstrative gesture was the original way of expressing emotion. The imitative gestures are descriptive gestures. They are divided into two subclasses, mimed and connotative. The mimed gestures are pure imitation. Connotative gestures posit a connection between themselves and the objects. This connection is to be imagined and cultivated. There is also another class of gestures, symbolic gestures. Demonstrative gestures are natural gestures and are unpremeditated. The imitative gestures or the descriptive gestures are greater in size and more variegated than the demonstrative gestures. Mimed gesture is the primary form of the imitative gesture. In miming one may either draw the outline of the object in the air by the index finger or imitate the image of the object three dimensionally with the hands. Both can also occur together. In the production of connotative gestures, one singles out arbitrarily a secondary characteristic of the object and uses it to represent the object. The symbolic gesture is a sign of some sort that calls to mind a mental concept 'whether the connection between them is concerned with an ordinary external object or with a more subtle relationship'. The gesture itself is not the idea as in the demonstrative gesture, or in the imitative mimed gesture. The symbolic gesture is not also connected with the idea by any natural similarity between it and the idea it represents. There are obscure links

between the symbolic gesture and the idea it represents. The symbolic gesture implies a completely distinct idea whereas the connotative gesture maintains some link with the idea through the former's reference to at least the secondary characteristics of the object it represents. The demonstrative, mimed and connotative gestures all refer directly to their meaning. In the composition of the symbolic gesture there is always one intermediate idea between the gesture and the ultimate idea implied. For example, a hand cupped like a laddle is directly associated with its meaning 'drinking gourd'. Originally the gesture suggests the laddle or gourd which later comes to refer to water, the content held by the laddle or water. Thus, the concept of laddle or gourd expresses an idea, water, different from itself. Note that this technique is resorted to also in oral language. For example, the word **pozhotu** in Tamil refers to *time* and *portion of time* which comes to mean *Sun*. Indian traditional grammars have identified this phenomenon in the spoken word and deals with them under **ākupeyar** in Tamil and **paryāyapadam/lakṣanārtha** in Sanskrit. In any case note also that the symbolic gestures can be replaced by or paraphrased into direct indicative gestures (either mimed or connotative) in gestural communication. Thus, the symbolic gesture of a hand cupped like a laddle or gourd meaning water can be easily replaced by a gesture pointing directly at nearby water, or through other imitational gestures.

Wundt finds that the natural gestural communication focuses mostly on the concretely perceptible. It covers three basic logical categories: objects, qualities, and condition. Since the same gesture may be used for several meanings, the gestural process provides for various nuances and movements for the same gesture to refer to different meanings.

For example, the deaf-mute touching a tooth can have four interpretations: the first meaning is tooth; then the two qualities of whiteness and hardness might have been implied; fourthly it may connote *stone*. Distinctions are made this way: Touching the tooth alone indicates 'tooth'; touching the whole row of teeth indicates 'whiteness'; the eyes beam at the same time. A tap on the incisors expresses 'hardness'; and adding a throwing motion after tapping the teeth indicates 'stone'. In spite of these qualifying devices, Wundt finds two instances which generally are marked by unsolvable ambiguity. One and the same gesture may have a different logical sense, depending on whether it is preceded by a principal gesture or a qualifying one. (Distinction between principal and qualifying gestures is also difficult to make.) In another instance of ambiguity, gestures may be used in limitless different ways to represent an object so long as the action represented by these gestures have something to do with the objects. Wundt finds that in general signs are more ambiguous than words are.

One important contribution Wundt made was his insistence that gestural communication does not merely consist of individual signs, but of sentences. Only by viewing signs as sentences we will be able to make complete sense out of gestural communication. There are no connectors in gesture sentences as we find in oral language sentences. We have to infer these features from the complete context of the expression. Also because the sign functions more or less as independent sentences, identifying them as subject, object or predicate, or as passive or active, or as substantive, verb, etc., also becomes a problem. The syntax of gestures may be reduced to the principles of logic, temporal and spatial functionality. The temporal and the spatial characteristics are the



vivid part of gestural communication. They are preponderantly in operation in gestural communication. The concrete reality and direct comprehensibility of the individual signs derive their strength from their operation. There is also successivity as in oral language. Logical operations depend upon and derive their strength from the feature that each sign could be considered a separate sentence. Gestural communication, according to Wundt, reports events exactly in the order in which they occur. It describes objects in the order in which they are perceived. Because of this reason, inversions of events, as found in oral language through various transformations, are not found in gestural communication. Cleft sentences and various other stylistic deviations from the norm are not attested in sign language. Wundt also suggests two conditions -- one, we have already cited. That is, the individual gestures follow one another in the order in which they are perceived; and the second is that because of the slow succession of individual signs, a gesture may take its meaning through preceding and not succeeding signs. Note that this need not be necessarily so in oral language expressions, where a crisscross pattern is easily found often. Because of these two reasons, Wundt finds that the gesturers are compelled to express first of all those images which have a greater affective meaning than others.

Wundt was viewing gestural communication in the overall framework of communication that is specifically human. Gestural communication is *not* a communication shared by both animals and humans. It is a specifically human act, a human product, a natural product of the development of expressive emotions. The forms of gestures, their developmental growth, extension of meaning, semantic change and syntactic order all distinguish it from the animal communication systems.

### 5.4.3. Efron and Racial Origin of Gestures

David Efron in his 1941 work (reissued in 1972) made a 'tentative study of some of the spatio-temporal and "linguistic" aspects of the gestural behaviour of Eastern Jews and Southern Italians in New York City living under similar as well as different environmental conditions'. This study done under Franz Boas was 'part of a somewhat extended investigation of the influence of race and environment upon bodily development and upon behaviour'. That was the time in which, some scholars, under the influence and milieu of developments in Germany, were inclined to make studies aimed at establishing the supremacy of one race over the other. Efron's study aimed at identifying whether there was any truth in such assumptions and convincingly proved the hollowness of these scholars by providing evidence from an area, performance in which was often sought and provided as proof for the supremacy of the pure Aryan. Boas found that every so-called race contained a great many individuals of distinct genetic characteristics and analogous genetic characteristics occurred in various 'races'. Boas identified two approaches to tackle this complex problem -- on the one hand, the behaviour of genetically identical individuals living under different conditions could be studied and on the other hand one could 'study the development and behaviour of large groups of individuals and of their descendants in markedly different environments'. Efron's study thus marks a significant departure from the by and large observational studies of American Indian sign language to a combination of both observation and experiment, in selected, and significant contexts of communication. Efron's study is, indeed, today comparable to any systematic sociolinguistic investigation. His is a forerunner to the study of gestural communication in social

and psychological terms. Unfortunately, this has not attracted the attention of scholars in any effective manner in the past. Currently with interest in sociolinguistics, and in the inter-relationship between verbal and nonverbal communication, both within the semiotic context and outside it, Efron's study is reissued in the last decade and is found completely in consonance with the research methods and trends in sociolinguistics. To us it appears that Efron's study is a perfect model for students of linguistics in India, whose training in adjacent sciences, such as psychology, sociology and anthropology is practically and wholly inadequate to undertake interdisciplinary experimental investigations involving complex and difficult statistical tools, and who would, all the same, like to pursue their research on nonverbal communication, and linguistic identities and functions based on nonverbal communication.

Efron makes an experimental investigation of the gestural behaviour of two so-called racial groups, Eastern Jews and Southern Italians in New York City, living under similar as well as different environmental conditions. The object of his investigation was to discover whether there were any standardized group differences in the gestural behaviour of these two different racial groups. If there were, indeed, differences, he aimed at finding out what became of these gestural patterns in members and descendants of these groups under the impact of social assimilation. In order to pursue his studies, Efron resorted to two, what he called, legitimate ways -- the experimental and the historical. His material on the historical side came from documents of the past, such as newspapers, novels, etc., which gave descriptions of the use of gestures and which convincingly proved that even in the societies (in Europe) which now abhor/avoid overt gestures

in the interactions of their members there were times in which gestures were considered natural, fashionable and so on. The experimental approach revolved around obtaining materials in 'absolutely spontaneous situations in the everyday environments of the people concerned who never knew that they were subject of an investigation'. He carried out the investigation by means of a four-fold method -- direct observation of gestural behaviour in natural situation, sketches drawn from life by a contemporary American painter under the same conditions, rough counting, and motion pictures studied by observations and judgements of naive observers and graphs and charts with measurements and tabulations of data obtained. In other words, Efron had all the elements of present day empirical methods of investigation employed. Moreover, Efron elevated the study of gestural communication from its basic roots in inventory making to an understanding of social communication processes.

Efron's study dealt with the gestures with regard to their spatiotemporal aspects as well as with regard to their referential aspects. In the former category he studied the "movements" and in the latter category he studied the use of gesture as language. Efron focused primarily upon hand movements and to a lesser extent on head movements, with occasional consideration of trunk position. He did not consider facial expression, posture, gait, or eye movements.

Just as Efron was innovative in using data from gestural communication for social sciences research, he was innovative also in providing a classificatory model for the description of gestures. Efron offered a neat classification, which is as follows:

### **Spatio-temporal:**

Gestures are considered simply as movement in

this place. These are treated as independent from interactive or referential aspects. Under the spatio-temporal aspects, we have radius, form, plane, body parts and tempo dealt with. Radius of the gesture is the size of the radius of movement. Maximum radius is the most distant point from the shoulder axis, reached by the wrist in an outgoing movement; minimum radius is the nearest approach of the wrist to the body in the course of the continuing gesture. Form refers to the type of movement -- sinuous, elliptical, angular or straight, whereas plane refers to sideways posture or posture towards auditor (frontal), up or down, vertical, away from speaker and auditor, etc. Under body parts, Efron includes the following as involved in gesticulation -- head gestures (area movement, rate and frequency, and whether used as substitute for hands), digital gestures (variety of positions and shapes of hands), unilaterality versus bilaterality in handmovement, ambulatory gestures (sequential transfer of motion from one arm to the other), and tempo (abrupt, dischronic versus flowing transitions from one movement to another). Note that dynamic parameters are used to capture the spatio-temporal aspects of gestural communication. In categorizations offered by Mallery and his contemporaries, the emphasis was on finding what constituted a gesture, that is, the emphasis was on the identification of elements that constituted a sign.

### **Interlocutional Aspects:**

These aspects are concerned with the behavioural conduct of the individuals in the interaction via gesture. Efron focuses on four items under this head. These are familiarity with the physical person of the interlocutor (interruption; capture of attention; physical contact), simultaneous gesturing of all interactants, conversational grouping (use of

space and distance between speakers and auditors) and gesturing with objects using an inanimate object as an arm extension.

### **Linguistic Aspects:**

These deal with aspects of gesture in relation to language -- whether the gesture has meaning independent of or only in conjunction with speech. Efron provides a very significant classification of signs under this. There are two major divisions -- logical-discursive and objective. Under logical discursive, the aspect of sign that follows the course of the ideational process and not the object or the thought itself is emphasized. Batons are gestures that give the successive stages of referential activity. The ideographic gestures trace or sketch out in the air the path and direction of thought. The objective gestures are divided into two major groups -- deictic and physiographic. The deictic gestures point out objects whereas the physiographic gestures show what they mean. The physiographic pictures are again of two types -- the iconographic gestures depict the form of a visual object whereas the kinetographic gestures depict a bodily action. The third major category of gestures, apart from those of logical-discursive and objective gestures, are the emblematic or symbolic gestures. The emblematic or symbolic gestures have a standardized meaning within a culture. These are culture-specific. The emblematic or symbolic gestures represent a visual or a logical object by means of pictorial or non-pictorial form which has no morphological relationship to the thing represented.

Efron finds very many interesting features of gestural communication that are motivated by processes in other behavioural patterns of the community to which the gesturers belong.

For example, he identifies a number of gestural acts which he terms as hybrid gestures. This is the combination of elements peculiar to the gestures of traditional individuals of Jewish or Italian communities with elements found in the gestures of Americans of Anglo-Saxon descent. From these findings, Efron concludes that 'the same individual may, if simultaneously exposed over a period of time to two or more gesturally different groups, adopt and combine certain gestural traits of both groups'. Efron compares a hybrid gesturer to a bilingual person who retains the characteristics of their first language in their performance in the second language. He finds that both the assimilated Eastern Jews and Southern Italians in New York City differ from their respective traditional groups and resemble each other. The gestural characteristics found in the traditional Jews and Italians disappear with the social assimilation of the *individual* Jew or Italian into the Americanized community and resemble gesturally the specific American group to which these individuals have become assimilated. Also they acquire the gestural characteristics of the social stratum of the Americanized community to which they get assimilated. Efron concludes that 'gestural behaviour, or the absence of it, is to some extent at least, conditioned by factors of socio-psychological nature ... (the findings) do not bear out the contention this form of behaviour is determined by biological descent'.

Efron's contribution, thus, is significant in several ways. Firstly, it presents a classification of gestures under actual communicative contexts and describes the role and function of gestures in modern society. While the earlier studies focused on the composition of signs, their primordial roots and the universal nature or otherwise of the gestures, mostly with an anthropological bias, Efron's study

takes the focus on gestural communication to a plane of sociological research. Gesture is now seen as another important sociological index. It shows how sociological processes could influence the repertory and use of gestures to meet various social ends. Secondly, Efron's study focuses on the inter-relationship between language expressions and gestures. Thirdly, Efron's study focuses on the dynamic nature of the gesture institution and shows how culture influences the use, retention and modulation of gestural communication. Fourthly, the methodology adopted is very significant since it combines both observation and experimentation, collects and collates data and arrives at conclusions based on empirical procedures and data. The method also breaks a new ground in social science research involving both linguistic and nonverbal variables. Finally, gestural communication is studied not for its own sake but as an aid for sociological inquiry. From a mere descriptive, and at times anthropology-oriented study, gestural communication now becomes a proper tool to understand modern societies as well. Thus, Efron's study paved the way for the social psychological studies of gestural communication.

#### **5.4.4. Recent Studies of Gestural Communication**

In this section we propose to present two types of studies as sample of recent studies of gestural communication. Both these studies operate around empirical data and methods of experimentation within the overall framework of principles of psychological experiments. In fact, one of the studies, that of Poyotos (1975), discusses problems of gestural inventories, raising issues of theoretical importance. Thus, this study is not directly based on any experiment, but is dealt with here because of its interest in preparing the inventories, from a modern point of view.



Poyotos argues in favour of bridging a gap between the teaching of linguistic structures and the association of these linguistic structures with the nonverbal patterns of behaviour in order to arrive at a total communicative competence. Poyotos asks for the inventories of gestures which almost exclusively accompany verbal behaviour, those which replace it, those which perform both functions, essential physical movement and are easily recognized by an untrained observer, specialized group gesture systems, heavily iconic gestures, body configuration and stance varying geographically as well as among communities, autistic gestures and erotic gestures. Poyotos suggests that we should differentiate between gestures, manners and postures, from the cultural point as well as considering the pedagogical possibilities.

There are three elements in the description of nonverbal communication, according to Poyotos -- gesture, manner and posture. By gesture Poyotos means 'a conscious or unconscious body movement made mainly with the head, the face alone, or the limbs, learned or somatogenic, and serving as a primary communicative tool, dependent or independent from verbal language; either simultaneous or alternating with it, and modified by the conditioning background (smiles, eye movements, a gesture of beckoning, a tic, etc.)'. Manner is seen similar to gesture, but 'is more or less dynamic body attitude and socially codified according to specific situations, either simultaneous or alternating with verbal language (the way one eats at the table, greets others, coughs, stretches, etc.)'. Posture is a conscious or unconscious general position of the body, more static than gesture, learned or somatogenic, either simultaneous or alternating with verbal language, modified by social norms and by the rest of the conditioning background, and used less as a communicative

tool, although it may reveal affective states and social status (sitting, standing, joining both hands behind one's back while walking, etc.).

Poyotos suggests that gesture study should take into account not simply the gesture itself but also linguistic, paralinguistic, kinesic (other than gestural), proxemic, and chronemic features. That is, gestural study takes into account other linguistic as well as non-linguistic (nonverbal) aspects of communication. Linguistic aspects have been covered in all previous studies since there have been always attempts to establish correspondence between linguistic signs and gestural signs. Use of other nonverbal features, in fact, a comprehensive coverage and use of all other nonverbal aspects for an understanding of gestural communication and for the preparation of gestural inventories appears to be a contribution of Poyotos. Likewise a gesture may also determine both linguistic and other nonlinguistic signs. In this way, all nonverbal aspects, five of them listed above, are dependent on one another.

Ekman and Friesen, two important contributors to the study of nonverbal communication in the contemporary scene of ours, propose five classes of nonverbal behaviour (Ekman and Friesen, 1969): facial expressions of emotion, regulators, adaptors, illustrators and emblems. Note that emphasis of gestural communication is now shifted from the study of constitution of signs to a study of the psychological bases of gestural communication. There is a predominant role assigned to psychological performance of gesture, although the classification offered does talk of constitutional elements as well as of the social functions. For the former, emblems are a fine example and for the latter the regulators are a good example. Of the five, emblems are more or less gestures: 'Emblems

are those nonverbal acts which have a direct verbal translation, or dictionary definition, usually consisting of a word or two, or perhaps a phrase ... An emblem may repeat, substitute, or contradict some part of the concomitant verbal behaviour; a crucial question in detecting an emblem is whether it could be replaced, with a word or two without changing the information conveyed'. In addition the meaning of the emblem should be known to most of the members of a group, class, subculture or culture. Also the emblems are used with a conscious intent to send a particular message to other persons who in their turn know that the message is deliberately conveyed. All these characteristics make gestural display a deliberate display.

Although answers are not provided, Ekman and Friesen raise several questions which link study of gestural communication directly with the concerns of theoretical developments in linguistics, psychology and psycholinguistics. For example, they raise the following questions which are currently debated within linguistics and psychology in relation to human language: What is the ontogeny of emblems? At what point do different emblems become established in the infant's repertoire? How does the acquisition of emblems interlace with the acquisition of verbal language? How are emblems utilized in conversation? Are there regularities in which messages are transmitted emblematically, and do these emblems substitute, repeat or qualify the spoken messages? Are there any universal emblems? Can we explain instances in which the same message is performed with a different motor action in two cultures? How are emblems related to American Sign Language? What is the phylogeny of emblems? While these questions link Ekman and Friesen's concerns with developments in linguistics and psychology, their

insistence on the identification of the emblem repertoire as 'the most sensible first step which enables pursuit of all the questions' (Johnson, Ekman and Friesen, 1975) takes them back to the days of Col. Mallery in which preparation of the glossary of gestural signs dominated study of gestural communication. Since gestural signs in parts of the system are, indeed, open-ended, one wonders whether it will be possible at all to have a comprehensive glossary of emblems, especially when gestures could be spontaneously and idiosyncratically formed and understood.

In conclusion of this section we present below the various methods adopted so far in the study of gestural communication. The list is not exhaustive but is indicative of the general trends.

- 1) Most of the early studies have been observational and descriptive.

- 2) Questionnaire method and informant-elicitation method have been adopted.

- 3) Open-ended narration by gestural signs is also encouraged.

- 4) Spoken language is used as an aid.

- 5) Use only of the sign language is also done to study gesture.

- 6) Comparison with the gestures of deaf-mutes, and comparison with the characteristics of spoken language are also made.

- 7) Anthropological tools are also used.

- 8) Experimental investigations are also made, wherein the functions of gestures in relation to psychological states are investigated.

- 9) Investigations of gesture for sociological analysis are also made.

- 10) Help of artists is also sought and made use of.
- 11) Identification of gestures presented is also sought.
- 12) Linguistic models are also used: phonological, syntactic and semantic analyses are simulated in the analysis of gestural signs.
- 13) Research based on developments in linguistics as regards grammatical structure is undertaken with regard to gestural signs.
- 14) Collection and analysis of gestures as found in literary works and other texts is also done.
- 15) Formal learning of gestures is yet another method of study of gestures.

#### 5.4.5. Gesture in Aesthetic Arts

We restrict our discussion of gestural signs in aesthetic arts to the use of gestural signs in Indian elitist dances in general and Bharata Natyam in particular.

Dances in literate communities of India may be broadly classified into folk and elitist dances. The occurrence of gesture is more frequent and varied in elitist dances than in folk dances. Secondly, conventionality and arbitrariness mark the elitist dances more than they mark the folk dances. Thirdly, most gestures in the folk dances are an accompaniment to the rhythmic recurrence of sounds whereas gestures in elitist dances generally accompany the 'sense' and/or is an illustration of the sense conveyed. Fourthly, the gestures in elitist dance require conscious learning, in addition to unconscious imitation, whereas gestures in folk dances are acquired more or less in an unconscious, natural manner. The learning of elitist dances is thus more institutionalized than the learning of folk dances. Fifthly, although the elitist dances are also spatially and temporally

bound, in the sense that there are specified dances for seasons and geographical conditions, and for specific themes, these elitist dances can be and are performed in other times as well purely as an aesthetic performance, whereas folk dances are generally performed in relation to the spatio-temporal set up prescribed. Once they cross the set up and are performed, they attain the value of pure entertainment just as elitist dances. In these latter conditions, a transmutation of the functions take place. Gestural communication, which spatio-temporally bound as in folk dances, is less conventional and arbitrary and more iconic and indexical. When folk dances, bound to certain spatio-temporal conditions, are performed outside these conditions, they begin to usurp the functions of elitist dances. Elitist dances function more as a code in the sense that they lend themselves for manipulation through addition, deletion, change, etc., in deliberately contrived processes initiated by individuals, whereas the folk dances generally focus more on preservation and their function as a code is found in their deliberate constraints not to function as a code of manipulation. Once folk dances are treated as a code, or only as a form that could be manipulated in form as well as content, they begin to emerge as elitist dances, individually designed. Some forms/stages of elitist dances also could acquire this characteristic but will still be considered elitist because in the latter their conduct will be textbased unlike in the case of folk dances in which oral tradition regulates the conduct. Gestural communication in elitist dances is more advanced in the sense that the gestures employed in them are more numerous than the gestures employed in folk dances. Also, the gestures in elitist dances are more closely connected with affect displays than one finds in folk dances. While the upper limbs play a more crucial role in elitist dances to further

accentuate the gestural communication processes, it is the whole body and the movement of the whole body that dominate performances in folk dances. Affect display via face always is an essential part of gestural communication by other parts of the body, in elitist dances. Gestures used in elitist dances are explained/explainable by the performers, which cannot be said for the performance of folk dances. In other words, those who perform elitist dances are almost always aware of their use of gestures. Learning processes give the 'rationale'. These people know the 'meaning' of the gesture, as conveyed to them by their teachers and the text and/or interpreted by them. They can repeat the gestures when asked to do so. The use of gestures in elitist dances is an intentional, deliberate effort to communicate, but the focus in folk dances appears to be more of self-expression and participatory nature, not only in enjoyment through sight but also in the act itself. In the elitist dances audience participation through act in the dances is not generally provided for, but in the folk dances there is always such an opening. Most Indian elitist dances are religion-based in the sense that music and dance have been traditionally seen as a medium to please gods. In other words, the ultimate goal of dances in the elitist tradition is to worship gods. This cannot be said of folk dances. The Vedas and Puranas are full of instances which narrate the dances of gods, dances of elitist nature. The 'dances' of the demons are described/portrayed as crude dances.

The creator of the dance (that is, Bharat Natyam) and the chief dancer is God Himself -- Siva. He is worshipped, among other forms, in His dancing posture as well. Vishnu, another supreme Godhead, is also known for his dances. Krishna dances with girls around. He also danced on the head

of Serpent Kālinga in the Yamuna river and kept him under control. In heaven, in all the celebrations of gods, beautiful dames dance and please the gods. In short, Hindu mythology is full of dances, danseuses and gestures employed in dances. Since there is, in traditional Indian view, a direct correspondence between all aesthetic arts, notions as regards gesture, classifications of gesture, and their function in aesthetics and general communication are governed in a manner similar to notions in poetics, dramatics, sculpture, painting and so on. There is a unity in arts and there is a unity of purpose for all the arts. We present below, however, only the gestural communication in Bharata Natyam as a representative sample of use of gesture in all arts.

In India, there is a long and ancient tradition of study of gesture via dance and drama. The earliest treatise available now on dance and drama (in fact on aesthetic arts including enjoyment of literature) is the work in Sanskrit **Nāṭyaśāstra** by Bharata Muni (certainly of pre-Christian era; around 500 B.C.?) Apart from a number of commentaries on **Nāṭyaśāstra**, there are several other works in Sanskrit, such as **Abhinaya Darpaṇam** which discuss theories of drama and present gesture employed in both dance and drama. We present here an overall description of the use of gestures as found mainly in **Nāṭyaśāstra**.

To begin with we should point out that gestures used in dance and drama form more or less a closed system, that both natural and conventional gestures are used in the Indian dance and that, since these gestures form a more or less a closed system, most gestures are polysemous. The gestures are mostly an accompaniment to either a poetic composition sung or a pantomime of a well known story and thus the polysemous ambiguity is resolved.



Gestures are stylized and lend themselves to some variations in their exhibition by individuals belonging to different schools/disciples of a teacher and geographic regions. The dance uses both upper and lower limbs, but the gestures by parts of upper limbs dominate. There is always an insistence on the use of appropriate facial expressions for each gesture. Use of facial expressions further contributes to a resolution of ambiguity inherent in the use of the same single gesture for several meanings. Gestures are not stationary in the sense that every gesture has a movement; without movement gesture cannot be seen. Also the concatenation of sense and events is not possible without the movement. The Indian dance consists mostly of hand gestures and (whole) bodily movements, although other parts may also be used. Costume is important, but does not play a direct role in gestural communication. Gestures are given frontally, although the back of the body may be shown and used for gestural communication. Both the front and back of the hand may be used for gesturing. For the same physical gesture, various meanings can be ascribed based on directions of the movement of the gesture. Some of the geometrical movements used are front/back, left/right, straight line/curved line, straight line/zig-zag line, facing one another/back to back, gestures with one hand/gestures with both hands, one side of the body/both sides of the body, congruence between hand and leg of the same side of the body/congruence between hand and leg of opposite sides of the body.

According to **Nāṭyaśāstra**, **abhinayas** (use of gestures, etc.) are devised by experts for drawing out the sense of songs and speeches in a play (IV:265). [The reference is made to Dr. Manmohan Ghosh's translation of **Nāṭyaśāstra**, (Ghosh, 1967). The Roman numeral refers to the chapter and

the Arabic numerals to the verse.] While this might or might not have been the original focus and functions of gestures used, in actual current practice in Bharata Natyam the gestures do not have, in the main, an expository function in relation to the texts sung; it is the texts that are sung that perform the expository function for an understanding of the gestures used. Since **abhinaya** is **devised** by individuals (experts), in its origin **abhinaya** becomes artificial and thus it is conventionally produced. And yet the conventionality is not based exclusively on artificially created gestures only, but is given to gestures drawn from natural expressions as well, since Bharata Natyam makes use of natural gestures for conventionally fixed meanings. To the extent the language of the text is not understood by the spectators one may say that the gestures of dance come to illumine the content of the text and enable the spectators to comprehend the text. If the language of the text is understood and if the content of the text is understood through the language in which it is composed, the singing of the text then takes on the role of illumining the gestures of the dance and the gestures themselves bring to life the text in a dynamic spectacular form. Since gestures are an integral part of dance we reach a point that without gestures there is no dance. Thus, gestures become a mark of identification of dance as a distinct aesthetic form. Note that our suggestion that it is the oral text that performs the expository function in relation to gestures employed in a dance is further supported by Bharata Muni's dictum (IV:280; Ghosh, 1967) that instrumental music should not be played when there is any song to be delineated by gestures, perhaps because the instrumental music may drown the song and thus will deprive the gestures their explanation by the oral text. Whatever be the interpretation and delineation of different roles of oral texts

and gestures, they have only a complementary role, a complemental semiotic relationship. Note that the function of gesture is to make a transmutation of the sense of the oral medium into vision medium and by doing so it forms an aesthetic genre. For Bharata Muni clearly states (IV:285-287; Ghosh, 1967) that a song is to be sung and the female dancer should delineate the meaning of the song by suitable gesture and translate the subject matter into a dance. Again (IV:298, Gosh, 1967), the entire words of the song should be represented first by gestures and then the same should be shown by a dance. Thus, a codification process in the progression of transmutation of sense from the oral medium to vision medium and from there to the elevation of the same into an aesthetic form is suggested here. In addition, these steps of progression indicate that there was some distinction made between the composition of gesture and their integration in dance. Gestures, in addition to their expository function as regards songs, are also used as an expository and spectacular device for all other words. Current practice generally links the gestural poses with dance, although in some parts of the dance, the dancer could remain stationary and make gestures appropriate to the words of the oral text. Bharata Muni (in IV:303; Ghosh, 1967) gives a dictum that when in course of a song some of its parts are repeated, the parts uttered first should be delineated by gestures and the rest are to be translated into dance. This dictum, while bringing out the complementary roles of gestures and oral text, also points out that in the performance of a dance a progression from presentation of individual gestures to a concatenation of the same is aimed at. When concatenation takes place, the pantomime of oral text is accomplished and herein both gesture and oral text get entwined to lose their separate existence and merge into a single aesthetic form -- in other

words, the original transmutation from one to the other, from oral text into gesture is no more significant and together they are transmuted into another world of existence. Thus, the use of gesture in arts perhaps has an extra stage of transmutation over and above the transmutation taking place between oral and gestural semiotic systems of communication. The word **abhinaya** is generally translated as histrionic representation and it means carrying the performance of a play to the point of direct ascertainment of its meaning (VIII:6; Ghosh, 1967). Further, **abhinaya** is so called because in the performance of a play it explains the meaning of different things (VIII:7; Ghosh, 1967). Note that in these two verses also the expository function of gesture is emphasized. **Abhinaya**, histrionic representation via gesture, etc., was meant originally to clarify the song.

Histrionic representation is known to be four fold: Gestures (**āṅgika**), Words (**vācika**), Dresses Make-up (**āhārya**) and the **Sattva** (manifestations of mental states). The gesture is of three kinds, namely, that of the limbs (**śārīra**), that of the face (**mukhaja**) and that related to different movements of the entire body (**ceṣṭakṛta**). Dramatic performance in its entirety relates to six major limbs and six minor limbs. The six major limbs are called **aṅga** and these are head, hands, breast, sides, waist and feet. The six minor limbs are called **upaṅga** and these are eyes, eyebrows, nose, lower lip and chin. Note that the body parts that are considered to be involved in gestural communication in dance are chosen for their mobility/flexibility for use in movement and that the chosen body parts have a greater visibility.

The gestures are called the **sākhā** and pantomiming through them is called **aṅkura**. While these technical terms are not immediately relevant

to our discussion, assignation of roles to these two types by some scholars is of some consequence in our work. For some scholars **sākhā** stands for gesture and posture in general and for some others it stands for the flourish of the gesticulating hand (**kara-vartana**) preceding one's speech. **Aṅkura** stands for the flourish of the gesticulating hand following speech. In the former, one finds a greater emphasis on the supporting role of the words for an interpretation of gesture and in the latter one finds a greater emphasis on the supporting role of the gesture for an interpretation of words.

**Nāṭyaśāstra** and subsequent works list gestures of various numbers and sorts for each major and minor limb. The numbers vary from limb to limb and there does not seem to be any particular reason for this variation except the functional use to which each limb is put. Along with the gestures produced by the limbs, **Nāṭyaśāstra** lists sixtyseven gestures of hands. Of these, gestures of single hands are twentyfour in number, those of combined hands are thirteen in number, and 'dance-hands' are thirty in number. The gestures of dance-hands, 'as their name implies, are obviously to be used in dance; but in course of acting too they are often to be used along with other gestures (single and combined) to create an ornamental effect. Unlike the single and combined hands which must represent one single idea or object, the hands in the dance-hand gestures are to be individually moved, not for representing any idea or object, but for creating an ornamental effect in acting as well as in dance' (Ghosh, 1967). Note further that **Nāṭyaśāstra** distinguishes between the realistic (natural) and conventional gestures: 'If a play depends upon natural behaviour (in its characters) and is simple and not artificial, and has in its (plot) profession and activities of the people and has (simple acting and) no playful

flourish of limbs and depends on men and women of different types, it is called Realistic (**lokadharmi**). If a play modifies a traditional story, introduces super-natural powers, disregards the usual practice about the use of languages, and requires acting with graceful **Aṅgahāras**, and possesses characteristics of dance, and requires conventional enunciation and is dependent on a heavenly scene and heaven-born males, it is to be known as **nāṭyadharmi**'. (XIV:62-65; Ghosh, 1967). The distinction between the natural and conventional gestures is recognized by Bharata Muni in several contexts. For example, while discussing the different kinds of head gestures (which are considered conventional), **Nāṭyaśāstra** also reports that there are many other gestures of the head which are based on popular/natural practice. This distinction between the natural and conventional gestures and the provision made to make use of the same in drama and dance, change the closed system characteristics of gestural communication in this aesthetic form to some sort of an open system. As an example of **loka-dharmi** gesture we may cite the use of **Padmakosa** hand used to represent lotus and similar flowers, and for **nāṭya dharmi** gesture most of the gestures employed in Bharata Natyam can be cited. **Nāṭya-dharmi** gestures are often aimed at creating an ornamental effect. In the actual use of gestures and their concatenation, the open-ended elements of the gestural communication system come to the fore. Also exigencies of the aesthetic art form facilitate this use. Bharata Muni recognizes this condition, while giving guidelines for the choice of hand gestures: 'In acting, hand gestures should be selected for their form, movement, significance, and class according to the personal judgement of the actor. There is no hand gesture that cannot be used in indicating some idea. There are besides other popular gestures connected with other ideas, and they are also to be used along with

the movements inspired by the Sentiments and the States. These gestures should be used by males as well as females with proper regard to place, occasion, the play undertaken and a suitability of their meaning' (IX:153-157; Ghosh, 1967). (Note that the assertion 'there is no hand gesture that cannot be used in indicating some idea' is counter to assessment of some present day scholars, for example, Taylor, 1978.) From the reference to popular gestures it is clear that although gestures form a closed system in dance, the provision to include gestures from **lokadharmi** makes the dance an open system to a certain extent.

Gestures come to be alive because of their movements. Their representation and concatenation depend on the movements, and the movements have a connection with different Sentiments and States on the one hand, and on the other, are manifested physically in three ways: Upwards, sideways and downwards. The movements of hands should be used with embellishments by means of appropriate expressions in the eyes, the eyebrows and the face. The gestures may have both conventional and natural movements. One should use the hand gestures according to the popular practice (IX:161-163; Ghosh, 1967). The movements of gestures are governed also by the social status of individuals. In histrionic representation of gestures, the social status of individuals, according to **Nāṭyaśāstra**, determines the quantum as well as the placement of gestures. (This notion, it may be noted, is found in real world also, even today in some form or the other. We shall see this in the next section.) The hand gestures of individuals of the superior category/status move near their forehead, whereas the gestures of the individuals occupying a middle social status (rank) move around/at about their breasts. The individuals of inferior social rank move their hand gestures

in regions below the breasts. Also note that **Nāṭyaśāstra** prescribes that persons of superior rank will have very little movement in their hand gestures, whereas the individuals of inferior rank should be portrayed as having profuse movements of hand gestures. In the case of individuals occupying a middle social rank, the movement of hand gestures should be of a medium frequency. In addition, **Nāṭyaśāstra** prescribes that the hand gestures of persons of superior and middle levels of social rank should conform to the characterization of gestures as given in the **Śāstra** (thus ascribing to these gestures learned, institutionalized and elitist status along with a dose of conventionality) in contrast to the hand gestures of persons of inferior rank which follow popular practice and the individuals' own natural habit (IX:61-66; Ghosh, 1967). However when occasions demand, wise people would make contrary uses of hand gestures to suit the occasions (IX:167, Ghosh, 1967). There are also certain restrictions as to the use of hand gestures for the expression of certain emotions. That is, for representation of certain emotions hand gestures are not seen proper and thus other means are to be used (IX:168-171; Ghosh, 1967). (Compare this with the dictum in IX:153-157 cited above.) This, indeed, is a very interesting and significant allocation of functions. In it we find an implicit recognition that the parts of the body are generally allotted differential functions in the conduct of nonverbal communication involving the use of gestures. This provision makes the use of gesture in aesthetic arts as well as in natural, realistic world different from the use of gesture as an independent mode as found in American sign language or in the language of deaf-mutes. Finally, hand gestures in the acting are dependent on the expression of the face, the eyebrows and the eyes. There should be a proper coordination between hand gestures and the look of the gesturer



in the sense the gesturer's eyes and the look should be directed towards the points at which the hand gestures are moving, and there should be proper stops so that the meaning may be clearly expressed (seen) (IX:207, 172; Ghosh, 1967).

The gestures of other major limbs are as follows, according to **Nāṭyaśāstra**. The breast is of five kinds (slightly bent, unbent, shaking, raised and natural) and thus has five kinds of uses. The sides are of five kinds (bent, raised, extended, turned round and drawn away). The uses are also of five kinds. The belly is of three kinds (thin, depressed and full) and its uses are also classified into three kinds. The waist is of five kinds (turned aside, turned round, moved about, shaken and raised). Their significance is also classified into five types. The thighs have five kinds (shaking, turning, motionless, springing up and turning round). The shank has five kinds (turned, bent, thrown out, raised and turned back). The feet are of five kinds (touching the ground with heels, placed on an even ground, heels thrown up, heels on the ground, middle of the feet bent). The thighs, shanks and feet form a single category with each having five different kinds and five different uses.

Among the gestures of minor limbs, the gesture of the head is of thirteen kinds. There are thirtysix kinds of glances identified. Note that the most numerous gestures are formed by hands (sixtyseven as already reported) followed by eyes (thirtysix). Eyeballs have gestures of nine kinds and eyelids have nine kinds of gestures and follow the movements of eyeballs. The gestures of eyebrows, another minor limb, are in accordance with those of the eyeballs and eyelids. They are seven in number. The gestures of the nose are of six kinds. There are six kinds of gestures of cheeks, six

of lower lips and seven of chin. The gestures of the mouth are six in number. Colour of the face is also treated as gesture and there are four kinds of gestures concerning the colour of the face. That gestural communication in dance (of the elitist type) is dependent on facial expression is made clear by the dictum in **Nāṭyaśāstra** that the colour of the face should be used to represent the States and Sentiments; and although the acting is done with gestures and postures (*sākhā*), and the major and minor limbs, without proper colour of the face it will not be charming (VIII:161, 162; Ghosh, 1967). The colour of the face is the basis of the States and the Sentiments (VIII: 164, 165; Ghosh, 1967). The gestures of the neck are of nine kinds. Gestures of the neck are all to follow the gestures of the head and the head gestures also are reflected in those of the neck. Note that **Nāṭyaśāstra** clearly stipulates the dependence of gestures based on their proximity of origin on the one hand and their relevance for interpretation, rather mutual interpretation, on the other. While head and neck gestures are of the former type, the contribution of facial expressions for an interpretation of gestures of other limbs is of the latter category.

### 5.5. Social Relevance of Gesture in Indian Societies

Throughout this chapter, and indeed throughout this book, for the description of every nonverbal communicative mode we had an eye on its implications for social and interpersonal conduct. We have demonstrated the social bases and social functions of nonverbal communicative acts. Just as human languages become an integral part and indices of social rank and behaviour, gestural communication, apart from its use as a mere communication channel and an art form in itself, is also used to exhibit implicitly the underlying

social relations. We shall present below some of these functions of gestural communication in Indian communities.

First of all, verbal communication becomes appropriate and is considered dynamic, and 'living' in some sense only if gestures are made along with speech. Proper intonation takes this role in speech in Indian communities. Having no gestures at all with one's speech signifies something negative/defective -- it could mean reluctance, non-involvement, non-cooperation, anger, disobedience, revolt, etc., on the part of the individual who produces speech without gestures. It could also mean an attempt to insult the addressee. At the same time, use of abundant gestures along with one's speech is not also looked upon favourably. Abundance of gestures is allowed as a mark of individuality, but when abundance is placed within a social rank matrix it takes on a negative function and as such while the abundance of gestures is discouraged, use of appropriate gestures is demanded in the contexts in which social ranks are kept consciously. Use of gestures in speech also has the function of announcing that speech is in progress and that the individual speaking is in a state of deliberate act of expression. Thus the gestures, when they accompany speech, have the function of announcing that a semiotic act is in progress.

Another important characteristic of gestural communication in Indian communities seems to be the phenomenon of suppression of gestures/avoidance of gestures in oral communicative acts. This suppression is again socially motivated and is a consequence of demands made by factors, such as level of education, locality of residence (urban/rural) and socialization processes of individual castes. These factors may either work in concert with one another or independent of one another.

Suppression of gestures in interpersonal communicative situations finds correspondences in several other communicative modes. For example, in speech by suppression of one's own social and regional characteristics, the individual attains the mastery of standard speech which carries with it greater acceptance and prestige. In the use of colours, gaudy and bright colours, more often than not, are associated with people of ethnic/religious groups, with a sense of superiority on the subdued colour; in other words, suppression of the brilliance of colours becomes the hallmark of some higher education and social status. Same is the case in the choice of fragrance, flowers, and application of hair oil. In the last mentioned item, we include both the quantity of oil and fragrance of oil applied on hair. Also note that brevity of speech and a less quantum of oral expression are considered a virtue. In all these communicative modes, suppression appears to be a dominant phenomenon. This phenomenon of suppression, thus, is found in a correspondingly natural manner in gestural communication as well, and is linked with the factors listed above.

An important variable that appears to regulate the use of gestures in Indian communities is the superior/inferior opposition. Under this binary opposition, several relations, such as those of master/servant, elder/younger, male/female, husband/wife, and father/mother are also covered, in addition to assumed/projected superiority/inferiority between castes. Use of gestures, particularly those of indexical nature referring to the addressee, is prohibited or taken to be an insult to the addressee and as revolt, etc. Gestures for beckoning become the privilege of the superior. Note that these restrictions are found also in the use of oral language. In normal communication contexts it seems to be the privilege of the superior

to use the gestural communication. Use of gestural communication itself by the persons of inferior category appears to be of a much less quantum.

There also appears to be difference in the quantum of gestures employed by men and women. In the rural context presence of individuals of certain status of the male sex encourages use of nonverbal means for communication by the females. In the most urbanized context, while such compulsions do not generally exist, resort to gestures is made as a mark of one's education and westernization by females. In general, use of gestures as an adjunct to oral communication is found more among the females of urbanized contexts with an inclination towards 'westernization' than among others.

This takes us to the question of conscious incorporation of gestures in the oral communication processes, that is, borrowing of gestures from contexts not one's own. Borrowing of gestures from folk traditions, rural traditions and from people of lower socioeconomic strata is rare and this corresponds to behavioural patterns on other planes, including oral communication. However, unlike the borrowing of words from English and use of the same very frequently and continuously all through one's life, borrowing of gestures is not a continuing and cumulative process. Gestures are borrowed; they become a mark of identity. They may even be a permanent fixture in one's communication activity. And yet they are more transitory in some sense than the words borrowed from English. Further, these borrowed gestures have lesser penetrating power than the words borrowed in the sense that the borrowed words reach even the deepest rural centres and the people of the lowest social and economic strata, whereas the borrowed gestures, for some reason or the other, do not go that far.

## CHAPTER 6

### NONVERBAL COMMUNICATION AND ABNORMALITY

#### 6.1. Abnormality

In this chapter, we present salient aspects of nonverbal communication by (i) Schizophrenics, (ii) Autistic individuals, (iii) Aphasics, (iv) Mentally retarded individuals, and (v) Psychiatrically disordered people. Thus, our coverage of abnormality includes the phenomena of schizophrenia, autism, aphasia, mental retardation and psychiatric disorders. Since our focus is on communication, we restrict ourselves to a description of verbal and nonverbal aspects and their inter-relationships, and not on the factors that cause these abnormalities.

The speech of the schizophrenic is difficult to comprehend even though in it proper words are used, well formed sentences are generally produced and appropriate intonations are also maintained. The difficulty arises because of loose associations between words used, and because there is some illogicality in the way ideas are connected. A new idea is formed and expressed in a manner that is distinctly different from the manner new ideas are produced through logically connected meaningful words in normal language. There are also abrupt beginnings, abrupt endings and interruptions apart from long silences and rhyming of words without any purpose from the

point of view of the normals. The stream of thought as revealed in the language expressions of the schizophrenics is one of incoherence and irrelevance. The schizophrenics, in spite of their ability to speak well and produce sentences at a stretch, differ from the normals markedly in what they talk about and how they talk about it. Schizophrenics may not be able to use the context to interpret the discourse and they are also unable to use the structural characteristics of language in correctly comprehending messages communicated by others. The features of cohesion in speech uttered to them is missed by them and, in their own speech, meaning cohesion and coherence are missing. The lack of connection between ideas in the utterances of the schizophrenics is of six categories (Rochester and Martin, 1979): mild shift in thought within a sentence, slight shift from one sentence to next within the same topic, drastic shift from one sentence to next within the same topic, mild shift from one sentence to next under a different topic, drastic shift from one sentence to next under a different topic and drastic shift within a sentence. Schizophrenic speakers appear to refer to the immediate situation rather than to abstract aspects of the situation. Schizophrenics ignore contexts of lexical items, but comprehend individual lexical items. That is, they focus more on lexical meanings than on the sentential concatenation of them as parts. The sound character of individual words influences the verbal utterances and lexical choice. Conjunctive relation between sentences is not controlled.

Autism is described in several ways -- as the quality of psychotic ideation in which the patient referred everything in the world to himself, a typical ego development, a disturbance of mobility, a disturbance of language and as a disturbance of personality development with inability to relate

to others. Of the several defining characteristics of autism, the linguistic features or the limits to linguistic capacity exhibited by the child, wherever the child has language, should be recognised as very important for the characterization of autism. Among the autistic children, relatively a minority alone has verbal communication. Of this relatively few, only a very small number has expressive and auditory speech. There appears to be a progression from primitive oral speech of 'mumbling' to clear vocalizations, from primitive grammatical structures to complex and elaborate grammatical structures, across the members of the autistic population. In other words, the nature of grammatical structure and the clarity of vocal expression differs from one autistic to the other. More often there is immediate and/or delayed echolalia (parroting of words and phrases not understood, and the parroting of stored words and phrases). There is a process of reversal of pronouns, generally between *you* and *I* and there is the process of referring to the self in third person. There are also other uses of words with peculiar references and connotations peculiar to the autistic child but these references and connotations need not be consistently used. Extreme literalness, comprehension difficulties, limited vocabulary, inappropriate and non-communicative language, mutism, neologisms, articulation difficulties, lack of questions and informative statements, frequent use of imperatives, limited output, little comprehension, little use of gestures, limited syntagmatic abilities (concatenation of one word with another in an appropriate manner), reduced sentence length and deviations in intonations are other major characteristics of the autistic language. Every truly autistic, or rather centrally autistic, child is known to fall short of a complete mastery of communicative skills at some level or the other. The autistic child has difficulties with the use of



past tense, and, with remote reference. Only the 'here and now' expressions dominate speech.

Aphasia is a consequence of brain injury, and it is found in those who have already acquired speech. In essence, aphasia is an impairment of the ability to use language. The impairment may be in one or more of the four modalities of language, namely, listening, speaking, reading and writing. It may also affect one or more basic components of language, namely, phonology, lexicon, syntax and semantics. Many and varied classifications of aphasia are available. In *pragmatic* aphasia, the patient cannot find language to give meaning to any stimulus, irrespective of the modality. In *semantic* aphasia, there is inability to select words to express meaning. In *syntactic* aphasia, the patient has difficulty in maintaining appropriate syntactic order. In *jargon* aphasia there is failure to understand speech and to speak intelligibly. In *global* aphasia there is complete loss of language. In another classification of aphasia, that of Jakobson and Luria (Jakobson, 1971), six types of aphasic impairments are identified:

- 1) Efferent aphasia in which words are preserved but the patient has a lot of difficulty in the construction of sentences, the words are generally independent of contexts and are mainly substantive concrete nouns, purely grammatical words disappear;

- 2) Sensory aphasia in which preservation of independent words becomes the major difficulty, the sentence pattern is preserved and the phonological combinations are also preserved. While in the efferent aphasia combination is deficiently found, in the sensory aphasia selection of words is deficiently found. The combination disturbances hamper the construction of a context, the encoding activity, as sentence construction is seriously impaired. The selection disturbances hamper the analysis of a context into its constituents, as sentence 'wholes' are retained but a

further breakdown into constituent elements is not achieved;

3) Dynamic aphasia in which the aphasic has difficulty in combining sentences, the dynamic aphasic has a lot of difficulty in constructing discourses and to build a monologue, the dynamic aphasic is unable to switch from one system of signs to another, such as answering a verbal order by a prescribed gesture;

4) Semantic aphasia in which the aphasic cannot grasp the difference between phrases, such as **wife's brother** and **brother's wife**, the word is uniform and inflexible;

5) Afferent or kinesthetic aphasia in which there is a disruption of the capacity for combination, a combinatory disruption different from the one found in efferent aphasia, the afferent aphasic makes a merger of phonemics, not a mere assimilation; and

6) Amnesic aphasia in which the patient is unable to make an appropriate iterative selection, the patient points correctly to his eye when asked to do so; when asked to point out his eye and ear, he points correctly to the first item and either omits the second or shows a wrong organ; when asked to point out eye, ear and nose in a sequence he is simply perplexed.

The mentally retarded individuals have retarded intellectual development and inappropriate behaviours. The mentally retarded individuals have impairments in maturation, learning and social adjustment. The mental retardates face the problem of concept attainment as well as language acquisition. While in the beginning, progress of language and concept formation may parallel the progress of their physical maturation, soon it will be seen that the conceptual ability and language skill are much less than the rate, quality and quantity of the same in normal children. They generally move through the regular stages of language acquisition and conceptual

attainment, but at a very slow rate. Whatever they have, by this slower rate, by adolescence will be their achievement all through later life. If they have reached by adolescence a mental age of 4 or 5 years they will have reasonably normal language. If they could reach only an age of 2 years or so, then the quality of their language and concept formation will be poor. Note also that the ability of a mental retardate to construct a fully grammatical sentence does not mean that he can speak or understand sentences fully. Since general intelligence is low, comprehension of sentences is also found low. Disorders of articulation and voice problems are easily found in the mental retardates. The language of the mentally retarded child is an incomplete language. The mentally retarded child has difficulty in providing names for categories which he has used previously. Speech defects are also commonly found. In the severely retarded there may be total absence of language even. The delay in speech development is already referred to above. The quality of language in terms of clarity of pronunciation, breath group pauses, intonations, etc., is also poor. There is less abstraction of ideas and this gets reflected in the manner objects are identified. The sentences produced are much shorter. There is also failure to go beyond the use of stereotyped patterns of speech, that is, a few fixed sentences are used for expressing needs in fixed patterns, just as second language learner does when he begins to learn the second language. The retarded children are unable to use language for further learning. These children have difficulty in matching verbs with their subjects. There is also the phenomenon of increase in verbs, pronouns and prepositions, but a decrease in nouns with the increase in mental age. Some retardates are given to repetition of vocabulary also. A very important characteristic of mental retardation is the incapacity of the

patient to retain what has been learned. The problem of storage and retrieval seriously hampers language acquisition as well as intellectual development, generally speaking. In essence, the mentally retarded have poor auditory memory, short attention span, deficient grammar and poor vocabulary and content, perseverance in oral speech, minimal imaginative and non-present time references and pursuits, inability to transfer, abstract and generalise meanings, absence of self-criticism, poor evaluation and organization of perceptual clues, and frustration in communication and withdrawal. There are inappropriate social responses and dependence on self-stimulation.

Under psychiatric disorders we consider neurotic disorders, character disorders and psychosomatic disorders: Neurotic disorders are generally called emotional disturbances. The major types of these disturbances are anxiety reaction, conversion reaction, dissociative reaction, phobic reaction, obsessive compulsive reaction, and depressive reaction. Anxiety reaction is revealed in direct expressions of anxiety, fear, sweating, etc. It is also shown by the tension, poor concentration, irritability, etc. In essence, anxiety reaction shows the ego's failure to cope up with the exigencies. Direct expressions of anxiety may be of a repetitive nature, imaginary fabrication and may be couched in a language of questions, with no impact of answers obtained on the language and on the non-verbal acts. In conversion reaction, stuttering is commonly attested. Hesitation phenomena are also common. Conversion reactions are transfer of psychological conflicts into body language. Thus, nonverbal communicative acts dominate, with voice subdued, faltering or totally lost. In dissociative reaction there is compartmentalization of experience. With changing roles, the style of language also changes. Phobic reaction is fear

even of things not realistically dangerous. Phobic reaction engenders avoidance, avoidance of speech itself. In obsessive-compulsive reaction, one is unable to give up the recent past. Character disorders are personality disorders. Inadequate behaviour marks these disorders. Inadequacy may be found in personality pattern, that is, there may be inadequacy in intellectual, emotional and social responses. There may be also personality trait disturbance as well as sociopathic personality disturbance. The psychosomatic disorders may cover reactions, such as those of skin and nervous system, endocrinal and cardiovascular systems. Contact ulcer, duodenal ulcer, gastrointestinal and respiratory reactions also are included here. Vocal tracts are affected and hence voice is affected. Psychosomatic disorders also influence style of language use.

What is normality and what is abnormality can be defined only in terms of socio-cultural ethos of the individuals. A proper understanding of the socialization processes, social and cultural values and the exigencies of the situation all go into the determination of abnormality and whether a particular behaviour in a particular context is to be considered disordered or in order. Generally speaking, both normal and 'abnormal' elements reside within every individual all the time, and work in complementary roles in a 'normal' individual. Some major variables that are usually taken into consideration to decide on the normality and abnormality status of individuals include social behaviour, physical activity, use of language, perceptual factors, such as dresses, reasoning within the cultural ethos, performance of anticipatory acts, and mental and physical condition. Family history and neurophysiological information are also used. Poor intelligence including IQ assessments and poor academic achievements are some

other factors that are considered to decide on the abnormality status. An unexplained inability to learn, an inability to behave in a level that should be in consonance with the developmental status (physical, cognitive and linguistic attainments appropriate for the age group), difficulty in maintaining confidence and belief in one's self and in overcoming feelings of sadness, inability to cope up with stressful situations also go into the decision to call a behaviour as abnormal. Very often medical status of the individual and the medical decision on the nature of behaviour of the individual influence the decision as to whether an individual's behaviour is considered normal or abnormal. In contrast, more often than not, normal behaviour is defined as what the majority does. What is common is taken to be normal. Adjustment to social norms becomes a major criterion of normality, although because of fear and other psychiatric reasons, the most abnormal person may seem to adjust best (acquiescence) with the majority. Generally speaking, normality or abnormality is to be decided on the basis of many factors that have their roots in social acts, individual psychology, and physical and physiological conditions, age, relativity of deviancy and individual styles.

What happens to nonverbal communication in abnormality conditions? Does it become abnormal too or is it retained with its function to communicate? Is its complementary role with oral communication retained or affected? What happens to it when language is lost or when its relevance is lost? In earlier chapters we have pointed out that in its ontogeny nonverbal communication comes into existence in a child much before language sets in; it coexists with language and succeeds it in cases where language is lost. In its phylogeny, some form of nonverbal communication can be found in all beings and there is a belief that verbal

communication might have originated from the earlier nonverbal communication modes. Whether one fully subscribes to the last mentioned view or not one cannot deny the essentiality of the complementary role of nonverbal communication for the conduct of communication, if not the conduct of verbal communication itself. This essentiality is easily demonstrated if we analyze as to what happens to verbal language and non-verbal communication in abnormality conditions.

There have been always attempts to explain the language disorders and thought disorders based on a comparison of primate behaviour and the behaviour of the primitive societies. While the comparison with the primitive societies and attempts to establish a rough equation at the levels of animistic, anthropomorphic, logolatric, prelogical use of language with that of nonliterate tribes and children has been shown to be utterly misguided, by several scholars including L. Bloomfield, E. Sapir and others, comparison with the primates, their behaviour, and their modes of communication continue to provide a useful backdrop for the study of language and language disorders. Equation between the two is rightly frowned upon, but an understanding of the former helps towards an understanding of the limits to language capacity found in individuals afflicted by these disorders. It also helps us to understand the richness of the language capacity itself in human individuals. Information from the primate communication systems have been utilized in the study of normal language itself -- to highlight in linguistics the uniqueness of human language capacity. Such a comparison has also been made in the study of language disorders. There is a curious similarity between researches on animal communication, in particular, between the learning tasks provided to chimpanzees, and the learning tasks provided

to autistic children in the tests of mastery of communicative skills. As majority of the autistic children have deficient or inadequate speech and most of them no speech at all, researchers have tended to expose the autistic children to a mastery of nonverbal communicative tasks in the sense that these tasks do not insist upon the manifestation of speech but on the manifestation of an ability to recognize and express paradigmatic and syntagmatic relations, and on the comprehension and use of novel, yet appropriate, communicative tasks. Both the autistic children and the chimpanzees investigated did not show recognition of any order in the relations between the signs learned by them. They have not demonstrated their capacity to discriminate with respect to the order of elements in a situation. Further, they have not demonstrated their capacity for displaced communication, semanticity, productivity and novelty. Immediacy reigns supreme and abstraction and generalization are of a limited scope. The autistic, the centrally located autistic child, fails to master any of the more important and crucial features of human communicative language. While he acquires one crucial feature, he fails to acquire another which also is part of the set of features that comprise human communicative language. In essence, he is predicted as suffering from a defect that is an essential feature of his very being. One should view this ultimate inability to acquire and use normal communicative language even through and in nonverbal aspects as the essential defining feature of acute autism, the centrally located autism in a wide spectrum of autistic manifestations. Every truly autistic, or rather centrally autistic, child is known to fall short of a complete mastery of communicative skills, at some level or other.

We have elsewhere suggested (Thirumalai



and Subramanyaiah, 1980) that the ultimate inability of the autistic child to acquire and use communicative language so well revealed through the impasses (Churchill, 1978) is symptomatic of his sub-human status as far as language is concerned. We have also claimed that the uniqueness of language found in each autistic child and the far-ranging varieties of the autistic language are the "relics" of the arduous process of evolution the *homo sapiens* had to undergo before they finally attained the propensity for the communicative language of the present stage. Since we have evidence that nonverbal behaviour is a developmentally earlier and more primitive form of communication which man shares with animals and since we have also evidence that nonverbal behaviours reflect very basic social orientations that are correlates of major categories in the cognition of social environments, we have to revise our position suitably.

A normal human being has both modes of communication -- verbal and nonverbal, properly mixed, one supporting the other. In the centrally autistic individual, not only this supportive function is lost, but also both the modes of communication are disordered/disoriented. Thirdly, in place of a balance between the two, in the centrally autistic individual we find divisibility of functions which should not have been divided but kept as single wholes for proper functioning of the communication. The unified signs are split and this appears to be the basis of the disorder. In other words, the language of the autistic provides ample evidence that communication process as a sign in humans has both verbal and nonverbal characteristics unified cohesively in it. A communication process may be considered normal so long as these two values are unified. A communication process is considered abnormal and disordered once this link between the verbal and the nonverbal is broken.

The loss of this link leads to further consequences. The manner by which the loss of this link is carried out in disordered individuals gives us a framework to classify and subclassify these disorders under various categories, such as autism, schizophrenia and others.

As regards the autistic at the nonverbal behaviour level, the centrally autistic individual is concerned only with his own self. At the verbal level, however, the autistic recognizes only the other. The reversal of pronouns so frequent and so characteristic of the autistic clearly indicates that at the verbal level the autistic has difficulty in mastering the use of first person pronouns (difficulty with own self) but no difficulty with the third person pronouns (easy recognition of the other). Where there is the provision of exclusive and inclusive pronouns in the plural slot of the first person, there is utter confusion since, both the forms, in one way or the other, identify the self with the other. Language is the institution where the antithetical positions of self and the other are synthesized. This synthesis is conspicuous by its absence in the language of the autistic. The unified function of the communicative sign shared by both verbal and nonverbal facets of the sign is split, with one part of it being assigned to the nonverbal and the other to the verbal without maintaining the link between the two. The individual is called autistic, at this level, only because of the former -- his exclusive concern with his own self in the nonverbal context -- rather than for his concern with *the other* in the verbal context.

The autistic recognizes only *here and now* in verbal behaviour. He is only partially successful with the *here and now* in his nonverbal behaviour. We call him autistic because of his self tying down to the *here and now* in his verbal behaviour and

not for his partial success with the same in his nonverbal behaviour.

The autistic is unable to master the past (tense) at all in his verbal domain, whereas he exhibits some partial memory trace in his nonverbal behaviour. Likewise, he is unable to master the *there and the future* in his verbal domain. He is partially successful with the *there and the future* in his nonverbal domain. He occasionally points out. He asks for things occasionally. He is unable to focus on this around. In other words, a dichotomy between the present and the nonpresent is maintained. At the verbal language level it is the present that is retained. At the nonverbal level it is the nonpresent that is retained.

The autistic has partial combining ability in nonverbal behaviour, but has no combining ability in verbal behaviour. The centrally autistic individual is able to proceed at least partially from one activity to another, whereas he has difficulty in combining sentences and/or producing a cohesive text of sentences. While the autistic engages himself in incessant activity, all by himself, he does not even recognise any activity around him.

The bases of verbal behaviour are found in nonverbal behaviour. There is a close link, a nexus between the two. The former is the extension of the latter. Autism as a disorder represents a break in the link between nonverbal and verbal language in humans. Furthermore, autism is to be viewed as a disorder not only in the verbal level but also in the nonverbal level.

We propose that in the very same manner the nature of the transmutation processes between the verbal and nonverbal modes would underlie specific form of disorders of communication. However research in these lines are yet to begin in any

substantive manner. In the subsequent sections, we take up, one by one, the aspects of nonverbal communication and show how these are found in the abnormalities listed for consideration. Thus we discuss speech and paralinguistic disturbances, proxemic behaviour in the abnormality, visual behaviour in the abnormals, face and abnormality, and kinesics of the abnormals.

## **6.2. Speech and Paralinguistic Disturbances in Abnormality**

Speech disturbances in normals are revealed through the problems they have with the structural properties of sentences and words, lack of coordination between gestures, facial expressions, voice modulation and other language aspects, and by their inability to properly perceive the implicit communications. These disturbances do communicate the condition of the individuals, their social status, their motives, etc. In the case of the abnormals, specific speech disturbances become diagnostic markers of the disorder. We have earlier considered the manner in which language is used, the implicit communication of content and intent via language and the paralinguistic features as part of nonverbal communication in normals. In the case of the abnormals also, language use may be considered as forming part of nonverbal communication in the sense that the language use in the abnormals communicates implicitly the nature of the disorder.

Speech disturbances have two functions in the abnormals. Both are diagnostic functions. The first function of the speech disturbance is to indicate that the subjects are disordered in some sense. Speech disturbances when occurring in a pervasive manner in individuals and in great frequency leading on to stoppage or extensive

interruption of communication processes define the people involved as disordered. Once speech disturbances are confirmed occurring in a pervasive manner in an individual, that individual may be considered as disordered in some sense. Here, the failure to respond, silence, is also to be considered a speech disturbance. The second function of speech disturbances is to indicate the nature of disorder, to place the disordered individual in a specific spectrum of disorders, to label him/her an autistic, a schizophrenic, an aphasic, etc. That is, the nature of speech disturbances is seen to vary from one disorder to another and as such the speech disorders are diagnostic markers of various types of disorders. Note that in the description given above, we do not make a distinction between language and speech and that in fact we use the term speech synonymous with language. Beyond speech, the nature of relationship, rather the link between the verbal and the nonverbal communication processes is a sure indication as to whether an individual is disordered or not. The speech disorders, for that matter, disturbance in any plane, in the normals, take on a social function, are governed by social behaviour and are interpreted as having certain specific meanings, both by the individual exhibiting the disturbances and those who observe the disturbances in the individuals. In the case of the abnormals, exhibition of such disturbances is not interpreted occurring within the ambit of social discourse with fixed social meanings, and as a transient phase in the individual who exhibits it or is forced to exhibit it voluntarily or involuntarily. The essential fact is that there are varying degrees of disturbances and that for each type of disturbance specific characteristics of speech and language are affected. Also there are varying degrees of use of language as such, uses of language for implicit communication (which we have treated as falling within the

nonverbal domain) and the use of nonverbal communication processes themselves. Under the use of language we include the manipulation of language skills -- listening, speaking, reading and writing as well as the manipulation of various manifest linguistic structures -- phonological, syntactic and semantic. Each disorder listed above has its own language characteristics and these language characteristics have the diagnostic function to identify and specify the disorder. This is not to say that one disorder is characterized as definitively distinct from another in terms of language use and that they do not share certain features of language use/nonverbal communication processes. In fact, this area in recent times has received some impetus from the developments in theoretical linguistics and is thus being explored only recently in greater depth, the results clearly revealing the specific linguistic features and the overlapping areas. The implicit communication processes have not yet received much attention. And as such what is presented below is generally concentrating upon the manipulation of language skills and various linguistic structures -- phonological, syntactic and semantic -- which perform the diagnostic function.

Speech disturbances in individuals who have normal language speech (whether the individuals are normal or disordered) communicate to the listener the anxiety status of the individual. Intrusive sounds, in particular laughs, sighs, and hiccups, indicate stress. Sweat also increases in stressful situations. Articulation errors also show anxiety. While speech disruptions indicate anxiety, there are situations in which verbal productivity, and increased rate of production of utterances also indicate anxiety. Ambiguity in speech is also related to anxiety. More difficult situations, in the sense of embarrassment and ambiguity,

also lead to disturbances. Dysfluency may be caused also by the status of individuals who elicit utterances. For showing deference and respect, dysfluency may be caused. There may be more dysfluency in certain domains such as family matters. If the situation is understood as one of distrust, dysfluency in speech may follow. Deceitfulness also leads to dysfluency. In most cases, dysfluency in speech lowers the credibility of speakers and listeners may form a low opinion of the abilities of the speakers.

We have already suggested that the nature of disturbance in language use marks the nature of disorder. Difficulty with the use of pronouns marks autism, use of language inappropriate to context marks schizophrenia, inability to use complex structures identifies mental retardation and division of language use into constituent modalities and use of one modality but failure in another modality distinguishes aphasia, and use of structures in a faulty manner transitorily and ability for self correction marks psychiatric disorders. Specially, under the category of paralinguistic usage, both psychiatric disorders and those forms of aphasia wherein vocal speech and concatenation are not affected fall under one class, more or less of proper use, whereas all the other disorders under consideration here fall under a category in which paralinguistic utterances are seriously impaired. Neither intonational patterns nor pauses within sentences nor the use of paralinguistic features for implicit communication are identified in the second category. For the entire group we may posit a hierarchy in the following order of ascending difficulty: intonations, meaningful juncture within sentences and implicit communication. As regards comprehension on the part of the patients of the second class of disorders, the same seems to be maintained. Yet the patients are liable

not to perform well in comprehension tasks at all if facial expressions on the part of the speakers are marked.

### 6.3. Proxemics in Abnormality

The use of personal space in abnormality is different in many cases from the use of personal space by normals. For example, the autistic spends most of his time away from other humans including members of the immediate family. He prefers a corner away from others and objects, and engages himself in hyperactivity ignoring/not recognizing the presence of others. The psychiatrically disordered people wish to be away from others wherever and whenever possible. When they are with others, they withdraw themselves internally. The schizophrenic shows fear in the presence of others and withdraws to a corner. He also makes flight reactions and when he is of a violent type, the schizophrenic makes others to run away from him so that he is able to maintain a greater personal space between him and others. The mentally retarded does not recognize personal space at all. Significant reduction in interpersonal distances both in the autistic child and the schizophrenic shows a recovery process from illness. The same holds true also for the psychiatrically disordered people. While in most cases of the disorders listed above, the scheme of maintaining personal distances between the patient and others around is maintained also for their distance from the objects, in some cases one finds that the distance between objects and patients is not that much avoided. In the case of the autistic, it is the hyperactivity that makes him break the closeness between him and the object. He is close to the object, the distance between him and the object is reduced and yet he will switch from one object to another frequently because of the instigating



influence of hyperactivity. In the case of humans, the autistic generally avoids others, perhaps because the humans are objects of a communicating nature, objects that make demands on the autistic to communicate, for which the autistic is not equipped and disposed favourably. In the case of the schizophrenic also, one finds that the schizophrenic closes the spatial gap between him and the objects and yet the relevance of object is lost on him. It is not that the schizophrenic, like the autistic, shifts from one object to the other; while remaining with the object the schizophrenic shifts to another whether that object is present or not. That is, the relevance of the object present and is physically near is lost on the schizophrenic. In the case of the mentally retarded, the relevance does not exist at all even though the spatial gap is narrower and the retention of the object near the patient is much longer than one finds in the autistic and the schizophrenic. There is practically no proxemic behaviour of significance in the case of the mentally retarded.

Touch within proxemic behaviour has greater relevance for the psychiatrically disordered people than for people having other categories of disorder. Because of insistence of maintaining a personal distance the schizophrenic has no provision for use of touch, whereas the autistic, even when he comes closer, is unable to receive the benefit of touch, for, in him, everything is transitory and not cumulative. In the case of the mentally retarded there is some benefit received from the use of touch by others, but its cumulative effects are lost on him because of his failure to recognize the possible effects. The aphasic receives the full benefits of touch and it becomes an important step in his process of recovery of cognitive skills in place of language mode, which is lost for ever. Touching as a mode of communication

indulged in by the disordered people is found among the psychiatrically disordered, the aphasic and in some moments with the autistic and the schizophrenic also. In other words, touch as an expressive mode in these disorders does exist but its use is variously distributed.

Odour recognition is present in the psychiatrically disordered and the aphasic. While it may be present in other disorders as well, its use as a communicating element is not recognized at all. Even the odour from food is not recognized as a communicating element. Indulgence in the enjoyment of one's own bodily odour, characteristic of all living organisms, is retained even in severely affected conditions.

#### **6.4. Visual Behaviour in Abnormality**

If vision is considered most expressive by creative writers of literature in India and in other cultures, avoidance and aversion of vision become the hallmark of, psychiatrically disordered people. Gaze aversion is also an important characteristic of the autistic and the schizophrenic, while the mentally retarded maintains gaze but with no purpose served. There is a close relationship between flight reaction and gaze aversion in the schizophrenic. Such a close relationship between gaze aversion and hyperactivity does not seem to be in operation in the case of the autistic. Indeed it is difficult to isolate gaze aversion and gaze avoidance from hyperactivity indulged in by the autistic. In all these four cases (the mentally retarded, the autistic, the schizophrenic and the psychiatrically disordered), however, seeing through without manifest purpose is common. If this is also considered as gaze avoidance (that is, here gaze avoidance is not achieved by turning aside, but seeing through the eyes of the other),

then gaze avoidance must be considered as the norm in all the abnormal conditions.

Another interesting point is that eye as a communicating means is generally not employed by the disordered people other than the aphasics. Gesturing via eye is not made. Expression of feelings other than pain is not also made. There is no coordination between the eyes and the expression of satisfaction (or happiness). This is similar to the condition we noticed as regards touch. The significance of touch is recognized but use of it as an expressive means is not found. The significance of stare is recognized and reacted to, but use of the same as a means of expression is not exploited; if resorted to, the use is transitory and does not form a regular pattern and is not repeated. All the same, use of vision as a means to express is found used earlier than the use of language when the psychiatrically disordered begin their recovery.

One of the most difficult things is the establishment and maintenance of eye contact with the non-aphasic disordered people. Since eye contact acts as a bridge-head for further therapy procedures, often the therapy becomes a frustrating experience with the autistic, the schizophrenic and the mentally retarded who show marked disinterestedness in eye contact. In the normals, eye contact begins the communication in face to face situations. In these three disordered categories of individuals, activities could be initiated without eye contact as well; since continuing the activities require eye contact, failure to maintain eye contact on the part of the patients brings the activities to a halt. In the case of the psychiatrically disordered, absence of eye contact could lead to worsening of the condition of the disorder. That is, while eye contact is refused, such a refusal could be

a reason, a contribution to further worsening of the condition. In these cases, percentage of no eye contact generally correlates very highly with anxiety and dysfluencies.

Another important function of eye is to announce the abnormality condition. Often it is found that the glaze in the eye performs this function. Perhaps this conclusion is culturally motivated and yet associating various quantities of glaze in the eye with one disorder or the other, or with one undesirable trait or the other is very commonly found across cultures. Very often glaze in the eye is associated with some form of schizophrenia. When this glaze is found occurring along with some other characteristics of a disorder, the glaze comes to support the conclusion arrived at.

What is the reaction of the categories of disordered people towards those who refuse to have eye contact with them or fail to communicate with them through eyes? There appears to be some qualitative difference between the autistic and the schizophrenic in this regard. Since the non-congenital schizophrenic has a past, he does comment upon such behaviour towards him indulged in by others, although he does not follow it up in his subsequent reactions in any serious manner. On the other hand, in the absence of such a past, or an experience in social context where eye contact and communication via eye is essential and socially regulated, the autistic does not even recognize the potential of eye communication. In the case of the mentally retarded, the significance of eye communication ranges from its nonrecognition to its brief partial utilization to meet their biological needs. In fact, for both the autistic and the schizophrenic, the avoidance of any interaction with them by the normals would perhaps be most welcome. Avoidance of contact and gaze aversion

for them appear to be aversion and avoidance of aggressive encounters as seen from their flight and withdrawal. Gaze aversion in some cases in the autistic may also serve the purpose reducing high arousal since the autistic are under the strain of high arousal conditions. The schizophrenics engage themselves less in gaze. Their gazes are shorter in duration. This less frequency and shorter duration of gazes match very well with the schizophrenic's impairment of ability for social contact.

Apart from the above listed difficulties, it is generally seen that children with a language disorder, a disorder caused by a cerebral dysfunction, have a greater visual bionocularity problem. (Bino-cular vision is simultaneous use of both the eyes). They may also have difficulty with eye movement. These children are unable to move their eyes properly, with direct and exact fixation. This problem is found in children who have neurologically instigated learning difficulties. Another abnormality noticed is the failure to focus. These children, instead of covering a normal range, may cover more than what they do normally, when it comes to reading language materials and as such they face reading comprehension difficulties. Reversal of letters, mirror image writing, inability to co-ordinate eye movements with bodily movements, failure to gauge the size, position and momentum of objects, failure to retain visual symbols in memory, poor reproduction of geometrical designs and general failure to connect visual stimuli with information conveyed are some of the defects generally noticed in terms of dysfunction not only of the eyes but also of the cognitive mechanism. Some of the other deficiencies are the failure to discriminate between objects which have only very slight differences, focus on a single visual stimulus while screening out other visual stimuli,

failure to bring out the details of an object in the sense that some of the major parts of an object may be omitted in the description, reversal of order of items presented, substitution of one for the other, etc.

Since the quality of vision in normals is not merely seeing an object or event, but seeing it in a manner experience has made it, the visual behaviour in abnormality conditions naturally lacks the significance of vision as we find it in normals. In abnormality conditions the patients are deprived of the experience of the world as the normals have. Thus, their vision lacks the significance attached to the seeing in normal, in several ways, and generally remains at the level (if the optic physiological mechanism is not impaired) of meaningless afferent processes in the optic pathway. This pathway, in abnormality conditions, does not get integrated with experience and intelligence to give meaning. As Professor Hall (Hall, 1969) points out, 'the visual process is complex, and so is its development, which is correlated with maturity, postural control, manual coordination, intelligence and personality. We gain experience in the world through our senses -- gustatory, olfactory, tactual, thermal, kinesthetic, auditory and visual. It is most usual for us to see and taste, see and smell, see and touch, see and feel hot or cold, see and move, and see and hear. There are relatively few occasions when we are able to feel and hear but not to see'. This coordination between senses is significantly absent in the disorders we have listed for our consideration. Secondly, as already pointed out, sight remains at the physiological level and does not get coordinated with the experience. In view of these, use of vision in nonverbal communication remains deficient.

### 6.5. Face in Abnormality

Facial displays of some emotions, such as fear, pain (sadness ?), anger and happiness are identified in the schizophrenic. However such displays, more often than not, are rarely beamed towards the other people. Self-expression, without manifest communicative intent, appears to be the dominant way in the exhibition of facial expression. Also note that the expressions shown on face are more transitory than one finds in the normals. There is a peculiar transition from one state to another in the facial expressions in abnormality conditions. The effects of the emotions on the face are erased out too soon. This is true also of the autistic and the mentally retarded. In all these cases, there is no relationship between what is expressed in one moment in the face and what is expressed next and/or behaved/performed subsequently. In normals there is a lingering effect which is lost in these disordered people. Also note that as in the case of normals, verbosity and excessive verbalization mark conditions of happiness in the disordered people; that is, under conditions of happiness, the disordered people engage in more verbalization than they normally do otherwise. In general, happiness must be identified with the fluency of speech in the mentally retarded, the schizophrenic and the autistic. What is required is to set up a standard background against which changes in emotions on face may be identified. Happiness in verbosity and verbal fluency, anger in stoppage of work, hyperactivity in the autistic, sadness in confused looks in all the three and pain uniformly expressed in restlessness and groaning in all the three disorders are attested. Shame as an emotion is identified in the face of the schizophrenic.

The link between facial expression and the

content communicated in oral language and/or behaviour is broken in normal communication to meet certain ends. The break in this link on all other occasions, (on occasions not intended to meet certain deliberate needs of pretension) is an indicator of abnormality conditions. Also note that the break in this link is involuntary under abnormality conditions and the abnormal individual is not aware of it. Only biological needs are met with by facial expressions in the abnormal; particularly expression of pain dominates. Expression of other emotions is carried out through other channels; for example, as already pointed out, verbalization and verbosity characterize the condition of being happy. The most important characteristic of facial expressions of the disordered people (those other than the aphasics) is their inability to express social emotions, such as approval, disapproval, sneer and sarcasm on their faces. Another dimension is their inability to bring forth social emotions or even biological emotions other than fright at will for demonstration or for other purposes of communication in the absence of any instigating real need.

Another interesting point about the facial expressions the disordered people have is that they do have culture bound aspects of facial expressions. These may not have been acquired consciously and may have been acquired by unconscious imitation only. There is, however, no clear cut communicative intent exhibited by the disordered. These may also be traces of behaviour acquired before the onset of abnormality. Note that in congenital abnormality social facial expressions are not acquired at all; culture bound aspects of smile in reception, etc., are not also acquired. However, in abnormality which sets in after acquisition and emergence of universal and culture bound aspects of facial expressions, the social expressions



are totally lost in their communicative intent. Even if the universal and culture-bound aspects are retained, as in some minimally disordered people, and in less severe cases, the communicative intent and content is limited. Only expression of pain appears to retain more of its original form and function.

The facial expressions in individuals are of different types -- some of them aim at hiding one's real feelings, some of them are reactions to the other's actions and objects, some have the function of accompanying and supplementing vocal language expression and some are mere adaptive behaviour as in the case of sigh or relief. While the first form of facial behaviour is conspicuous by its absence (and perhaps is beyond the capacity of the abnormals since their cognitive ability for communication is affected), the last mentioned is more easily, even if rarely, found in abnormality. As a rule, facial expressions are difficult to manipulate at will by the disordered.

It is seen that blind children show facial expressions similar to normals. This evidence prompts us to posit an innate component to facial expressions. Furthermore, some experimental investigations indicate that there are differential physiological readings for joyful, angry and sad thoughts, without any manifest expressions on face (Schwartz, 1974; Schwartz, et al, 1975). The above cited scholars also suggest that the normal resting state for the depressed is one of sadness, and not similar to the resting state we find in normals. This is comparable to what one finds as regards the difference in resting positions of the tongue in normals and in those whose speech is disordered. Basically, in all aspects of behaviour, the resting positions -- the normal positions -- are differentially established in the

normal, and in the abnormal. Facial expressions are no different in this regard.

### 6.6. Movement in Abnormality

Both lack of movement and excessive movement characterize disorder. The autistic moves away from the people around and engages himself in excessive motion of his limbs and body while engaging himself in his own activities. The schizophrenic's movements of both his limbs and body as well as his eyes show dissynchrony. There is complete lack of movement in some types of schizophrenic cases whereas in some others repetitive action similar to hyperactivity of the autistic is found. In some others there is purposeless wandering, and flight. Inability to sit tight and to concentrate on anything in particular is absent, whereas moving away from the habitual place in one's own residence to a public place and make it the habitual place of stay and transaction is common. The mentally retarded ignores movement.

As regards the movements of individual body parts, such as head, hands and legs, leg movements are more numerous. In the case of the psychiatrically disordered there is a correspondence between the moods and bodily movements of the patient. There is always a similar correspondence in the normals. The correspondence between the two in the condition of abnormality, however, is of a different type: The transition to the normal state is faster and surer in the normal condition than in abnormality.

Purposeless and mechanical movements mark abnormality conditions. Failure to use gestures for communication is another characteristic. Postural appropriateness is found lacking in terms of social norms. Often grasps and grips communicate

needs. Uncertainty and confusion and inability are also expressed through selected hand movements. To what extent these hand movements are performed with an intent to communicate cannot be decided. These movements appear, more often than not, to be instinctive reactions to the situation encountered. They are not transformed into and utilized as deliberate communicative acts. In some cases of schizophrenia, there is not even coordination between limbs on both sides of the body. The gait of the disordered is not in coordination with his steering looks. The gait could be of varying speed without any predictability. Circling and spinning may characterize some of the schizophrenic cases. They may also be given to outlining of objects with fingers. They may also trace around the given objects; but this outlining and tracing around process is not used for gesturing. Again the outlining and tracing around objects may be accompanied by oral description. The oral description may begin appropriately but will soon be not in consonance with the object being described.

The function of body movement, rather the function of movement per se in the disordered, is varied. It may be just a reaction to internal physical discomfort. It may be a function of the nature of the disorder. It may also be a function of communicative intent. Movements toward object, for instance, may be an effort to communicate something in relation to that object. Preoccupation with and manipulation of one part of the body may be a factor of the nature of the disorder. In some cases, movement may be a function of the speech uttered. Assigning meanings to movements of the disordered becomes a problem, indeed, to the clinician and the caregiver. In any case, like most of the other behavioural patterns, movement as a function of speech, that is, its association with speech uttered (only those appropriate movements) signifies return to recovery.

## REFERENCES

- ALLPORT, F. H., 1924.  
**Social Psychology.**  
Houghton Mifflin, Boston.
- ANASTASI, A., 1958.  
**Differential Psychology.**  
Macmillan, New York.
- ARGYLE, M., 1969.  
**Social Interaction.**  
Atherton, New York.
- ARGYLE, M. AND DEAN, J., 1965.  
• Eye Contact, Distance and Affiliation.  
**Sociometry**, 28, 289-304.
- ASCH, S. E., 1952.  
**Social Psychology.**  
Prentice Hall, Englewood Cliffs, N.J.
- BIRDWHISTELL, R. L., 1970.  
**Kinesics and Context : Essays on Body Motion  
Communication.**  
University of Pennsylvania Press, Philadelphia.
- BLOOMFIELD, L., 1933.  
**Language.**  
Indian Reprint: Motilal Banarsidass, Delhi (1963).
- CHERRY, C., 1980.  
The Communication Explosion.  
In Foster, M. L. and Brandes, S. H. (Eds.).  
**Symbol as Sense : New Approaches to the Analysis**

[278] References

- of Meaning.**  
Academic Press, New York.
- CHURCHILL, D. W., 1978.  
**Language of Autistic Children.**  
John Wiley & Sons, New York.
- CODERE, HELEN (Ed.), 1966.  
**Kwakiutl Ethnography** by Franz Boas.  
The University of Chicago Press, Chicago.
- COLE, P., 1975.  
The Synchronic and Diachronic Status of Conversational Implicature.  
In Cole, P. and Morgan, J. L. (Eds.).  
**Syntax and Semantics Vol.III : Speech Acts.**  
Academic Press, New York.
- von CRANACH, M., 1971.  
The Role of Orienting Behavior in Human Interaction.  
In Esser, A. H. (Ed.).  
**Behavior and Environment : The Use of Space by Animals and Men.**  
Plenum Press, New York.
- DUNCAN, S. D., Jr., 1969.  
Nonverbal Communication.  
**Psychological Bulletin**, 72, 118.
- ECO, U., 1977.  
**A Theory of Semiotics.**  
Macmillan, London.
- EFRON, D., 1972.  
**Gesture, Race and Culture.**  
Mouton, The Hague (Originally published in 1941).
- EKMAN, P., 1972.  
Universal and Cultural Differences in Facial Expressions of Emotions.  
In J. K. Cole (Ed.).  
**Nebraska Symposium on Motivation.**  
University of Nebraska Press, Lincoln.

EKMAN, P. AND FRIESEN, W. V., 1969.

The Répertoire of Nonverbal Behavior : Categories,  
Origins, Usage and Coding.  
**Semiotica**, 1 : 49-97.

EKMAN, P., FRIESEN, W. V. AND ELLSWORTH, P., 1972.

**Emotion in the Human Face : Guidelines for Research  
and an Integration of the Findings.**  
Pergamon Press, New York.

FANT, L., 1964.

**Say It with Hands.**  
Gallander College Press, Washington.

FILLMORE, C. J., 1968.

The Case for Case.  
In Bach, E. and Harms, R. (Eds.).  
**Universals in Linguistic Theory.**  
Holt, Rinehart & Winston, New York.

FILLMORE, C. J., 1971.

Verbs of Judging : An Exercise in Semantic Description.  
In Fillmore, C. J. and Langendoen, D. T. (Eds.).  
**Studies in Linguistic Semantics.**  
Holt, Rinehart & Winston, Inc., New York.

GHOSH, M., 1967.

**The Nāṭyaśāstra** of Bharata Muni.  
(Translation) Vols.I and II.  
Manisha Granthalaya Private Ltd., Calcutta.

GIBSON, J. J., 1950.

**The Perception of the Visual World.**  
Houghton Mifflin, Boston.

GONDA, J., 1969.

**Eye and Gaze in the Veda.**  
North-Holland Publishing Company, Amsterdam.

GRICE, H. P., 1975.

Logic and Conversation.  
In Cole, P. and Morgan, J. L. (Eds.).  
**Syntax and Semantics Vol.III, Speech Acts.**  
Academic Press, New York.

[280] References

- HALL, E. T., 1959.  
**The Silent Language.**  
Doubleday & Company, Inc.,  
Garden City, N.Y.
- HALL, E. T., 1963.  
A System for the Notation of Proxemic Behaviour.  
**American Anthropologist**, 65, 1003-1026.
- HALL, E. T., 1969.  
**The Hidden Dimension.**  
Doubleday & Company, Inc.,  
Garden City, New York.
- HALL, E. T., 1977.  
**Beyond Culture.**  
Doubleday & Company, Inc.,  
Garden City, New York.
- HARPER, R. G., WIENS, A. N., AND MATARAZZO, J. D., 1978.  
**Nonverbal Communication : The State of the Art.**  
John Wiley & Sons, New York.
- HARRISON, R. P., 1973.  
Nonverbal Communication.  
In I de Solo Pool, W. Schramm, N. Maccoby, F. Fry,  
E. Parker and J. L. Fein (Eds.).  
**Handbook of Communication.**  
Rand McNally, Chicago.
- IZARD, C. E., 1971.  
**The Face of Emotion.**  
Appleton-Century Crofts, New York.
- JAKOBSON, R. 1971.  
**Studies on Child Language and Aphasia.**  
Mouton, The Hague.
- JOHNSON, H. G., EKMAN, P., FRIESEN, W. V., 1975.  
Communicative Body Movements : American Emblems.  
**Semiotica**, 15 : 335-354.
- JOOS, M., 1967.  
**Five Clocks.**  
Harcourt, Brace & World, New York.

KEENAN, E. L., 1971.

Two Kinds of Presupposition in Natural Language.

In Fillmore, C. J. and Langendoen, D. T. (Eds.).

**Studies in Linguistic Semantics.**

Holt, Rinehart & Winston, Inc., New York.

KENDON, A. 1967.

Some Functions of Gaze-Direction in Social Interaction.

**Acta Psychologica**, 26, 22-63.

KNAPP, M. L., 1972.

The Field of Nonverbal Communication : An Overview.

In C. J. Stewart and B. Kendall (Eds.).

**On Speech Communication : An Anthology of Contemporary Writings and Messages.**

Holt, Rinehart & Winston, New York.

LaBARRE, W., 1962.

**Paralanguage, Kinesics and Cultural Anthropology.**

Indiana University, Bloomington.

LJUNG, M., 1965.

Principles of a Stratificational Analysis of the Plains Indian Sign Language.

**International Journal of American Linguistics**, 31, 119-127.

MALLERY, G., 1880.

**Introduction to the Study of Sign Language Among the North American Indians as Illustrating the Gesture Speech of Mankind.**

United States Bureau of American Ethnology,  
Washington, D.C.

Reprinted in Umiker-Sebeok, D. J. and  
Sebeok, T. A. (1978).

MALLERY, G., 1882.

The Gesture Speech of Man.

**Proceedings of the American Association for the Advancement of Science.**



[282] References

MEHRABIAN, A., 1971.

Nonverbal Betrayal of Feeling.

**Journal of Experimental Research in Personality**,  
5 : 64-73.

MEHRABIAN, A., 1972.

**Nonverbal Communication.**

Aldine Publishing Company, Chicago.

MORRIS, C. W., 1938.

**Foundations of the Theory of Signs** (Vol.I, No.2).

University of Chicago Press, Chicago.

OSGOOD, C. E., 1966.

Dimensionality of the Semantic Space for Communication via Facial Expressions.

**Scandinavian Journal of Psychology**, 7, 1-30.

PIAGET, J., 1960.

**Psychology of Intelligence.**

Adams Littlefield, Peterson, N. J.

PIERCE, C. S., 1931-1935.

**The Collected Papers of Charles Sanders Pierce**, Vols.I to IV.

Harvard University Press, Cambridge, Mass.

POYOTOS, F., 1975.

Gesture Inventories : Fieldwork Methodology and Problems.

**Semiotica**, 13 : 199-227.

POYOTOS, F., 1977.

Forms and Functions of Nonverbal Communication in the Novel : A New Perspective of the Author-Character-Reader Relationship.

**Semiotica**, 21 : 295-338.

REUSCH, J., 1955.

Nonverbal Language and Therapy.

**Psychiatry**, 18 : 323-330.

ROCHESTER, S. AND MARTIN, J. R., 1979.

**Crazy Talk : A Study of the Discourse of Schizophrenic Speakers.**

Plenum Press, New York.

de SAUSSURE, F., 1915.

**Introduction to General Linguistics,**

Tr. by Wade Baskin.

The Philological Library, Inc., Philadelphia.

SCHEFLEN, A. E., 1968.

Human Communication : Behavioral Programs and  
Their Integration in Interaction.

**Behavioral Science**, 13, 44-55.

SCHWARTZ, G. E., 1974.

Facial Expression and Depression : An Electromyogram  
Study.

**Psychosomatic Medicine**, 36, 458.

SCHWARTZ, G. E., FAIR, P. L., GREENBERG, P.S., MANDEL, M. R.  
AND KLERNAN, G. L., 1975.

Facial Expressions and Depressions II : An Electromyo-  
graphic Study.

**Psychosomatic Medicine**, 37, 81-82.

SEBEOK, T. A., 1976.

**Contributions to the Doctrine of Signs.**

Peter de Ridder Press, Lisse.

SIVARAMAMURTI, C., 1961.

**Indian Sculpture.**

Allied Publishers, New Delhi.

SOMMER, R., 1967.

Small Group Ecology.

**Psychological Bulletin**, 67 : 145-51.

STEINER, G., 1969.

**Language and Silence.**

Penguin Books, Hammondsworth.

STEINER, G., 1972.

**Extra Territorial : Papers on Literature and Language  
Revolution.**

Penguin Books, Hammondsworth.

SUNDARAMOORTHY, G., 1974.

**Early Literary Theories in Tamil.**

Sarvodaya Ilakkiya Pannai, Madurai.

[284] References

TAYLOR, ALLAN ROSS, 1978.

Nonverbal Communication in Aboriginal North America :  
The Plains Sign Language.

In Umiker-Sebeok, D. J. and Sebeok, T. A., 1978.

**Aboriginal Sign Language of the Americas and  
Australia, Vol.II.**

Plenum Press, New York.

THIRUMALAI, M. S., 1983.

**Aspects of Language Use.**

All India Tamil Linguistics Association, Annamalainagar.

THIRUMALAI, M. S., 1984.

**Aspects of Tamil Semiotics.**

To be published.

THIRUMALAI, M. S. AND SUBRAMANYAIAH, 1980.

Autism and Language.

**Journal of Indian Speech and Hearing Association,**  
Bombay.

TOMKINS, S. S., 1962.

**Affect, Imagery, Consciousness, Vol.I : The Positive  
Affects.**

Springer, New York.

TRAGER, G. L., 1958.

Paralanguage : A First Approximation.

**Studies in Linguistics, 13, 1-12.**

UMIKER-SEBEOK, D. J. AND SEBEOK, T. A. (Eds.), 1978.

**Aboriginal Sign Languages of the Americas and  
Australia, Vols.I and II.**

Plenum Press, New York.

WERNER, H., 1957.

**Comparative Psychology of Mental Development.**

International Universities Press, New York.

WEST, La MONT, 1963.

Aboriginal Sign Language : A Statement.

In Stanner, W. E. H. and Sheils, H. (Eds.).

**Australian Aboriginal Studies.**

Oxford University Press, London.

Also in Umiker-Sebeok, D. J. and Sebeok, T. A. (1978).

WIENER, M. AND MEHRABIAN, A., 1968.

**Language Within Language : Immediacy, A Channel in Verbal Communication.**

Appleton-Century Crofts, New York.

WOODWORTH, R. S., 1938.

**Experimental Psychology.**

Henry Holt, New York.

WUNDT, W., 1973.

**The Language of Gestures.**

Mouton, The Hague.

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This book, **Silent Talk : Nonverbal Communication**, by Dr. M.S. Thirumalai, Professor-cum-Deputy Director, CILL, discusses the aspects of nonverbal communication and links the same with social and psychological factors as well as verbal communication. The study of nonverbal communication always formed part of Indian traditional grammars. Grammar, then, was seen as a study of the comprehensive phenomenon involving both verbal and nonverbal elements. Modern linguistics courses, however, have not adequately focussed upon aspects of nonverbal communication and the inter-relationship between verbal and nonverbal communication processes. Study of nonverbal communication will be found highly useful for culture analysis and description, sociological analysis, for language teaching and learning, for therapy purposes and for literary analysis, among others. I do hope and wish that, with the publication of this book, the students of linguistics and related disciplines will show a greater interest in the study of aspects of nonverbal communication.

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