

Chapter 7

The Primary Site of the Affects: The Face

WHAT AND WHERE ARE THE PRIMARY AFFECTS?

The low visibility of the affects and the difficulties to be encountered in attempting to identify the primary affects have already been described. Yet our task is not as difficult as it might otherwise have been, for the primary affects, before the transformations due to learning, seem to be innately related in a one-to-one fashion with an organ system which is extraordinarily visible.

In this chapter we will discuss first, the importance of the face to the human organism; second, the impact of the faces of others in human development; third, a unique physiological study which explored and mapped in detail the possible relations between specific facial muscles and specific affects.

Let us again compare our knowledge of the affects with our knowledge of the drive system. Consensus on what are the primary drives and where they are located has not yet been attained by investigators. The precise mechanisms mediating hunger still elude us. Nonetheless there is sufficient knowledge of what hunger is and where it is and when it is activated to permit profitable research which is cumulative and which will eventually yield answers to the basic questions about the nature of this and other drives. Psychologists, and particularly Behaviorists, have, however, tended to exaggerate the ease of identifying and measuring drive strength. A constant number of hours of food deprivation, a measure of drive strength frequently used, does not produce the same strength of hunger in all animals of the same species, certainly not in all species, and one hour of deprivation at different times of the hunger cycle is far from being an additive equal interval in either the strength of the hunger drive or in its behavioral consequences. Whether percentage loss of

body weight is a formula which will prove an adequate measure, despite gross differences in body type, remains yet to be demonstrated. Difficult as these problems are, cumulative progress is being made toward their solution.

In the case of affects this is not so. There is no consensus on what are the primary affects nor where they are, nor on the nature of the underlying mechanisms. This is so despite the fact of radical increases in our knowledge of affects. Revolutionary discoveries in this area have caught us conceptually unprepared.

If we are to exploit these empirical discoveries in the domain of affect we must first of all attain some consensus on fundamentals. What are the primary affects and where are they? It is not so important to attain complete consensus or indubitable knowledge in this domain as to open the field for investigation which will eventually produce solutions through cumulative knowledge.

Most contemporary investigators have pursued the inner bodily responses, after the James-Lange theory focused attention on their significance. Important as these undoubtedly are, we regard them as of secondary importance to the expression of emotion through the face. We regard the relationship between the face and the viscera as analogous to that between the fingers, forearm, upper arm, shoulders and body. The finger does not "express" what is in the forearm or shoulder or trunk. It rather leads than follows the movements in these organs to which it is an extension. Just as the fingers respond both more rapidly with more precision and complexity than the grosser and slower moving arm to which they are attached, so the face expresses affect, both to others, and to the self, via feedback, which is more rapid and more complex than any stimulation of which the slower moving visceral organs are capable.

There is, further, a division of labor between the face and the inner organs of affective expression similar to that between the fingers and the arm. It is the very gross and slower moving characteristic of the inner organ system which provides the counterpoint for the melody expressed by the facial solo. In short, affect is primarily facial behavior. Secondly it is bodily behavior, outer skeletal and inner visceral behavior. When we become aware of these facial and/or visceral responses we are aware of our affects. We may respond with these affects however without becoming aware of the feedback from them. Finally, we learn to generate, from memory, images of these same responses which we can become aware of with or without repetition of facial, skeletal or visceral responses.

It is my belief that we must return to Charles Darwin's classic *The Expression of the Emotions in Man and Animals*. We must pursue Darwin's inquiries with the aid of the modern ultra-rapid moving picture camera. Modern photography has put into the hands of the investigator a time microscope which can amplify facial responses up to a million frames per second. Landis and Hunt employed shutter speeds up to 3,000 frames per second in their pioneer investigations of the startle pattern. They have provided a model for the empirical study of affects which has been largely neglected. Their research has made it clear that the speed of response of facial muscles is such that some responses, such as partial eyelid closures, are too fast to be seen by the naked eye, and that the patterning of both facial and gross bodily movements is so complex that one must have resort to repeated exposure of the same moving pictures if one is to extract the information which is emitted by human beings as they respond with affect in changes of facial and bodily movement.

PSYCHOLOGICAL DOMINANCE OF THE FACE

The dominance of the face and head in development has been called the cephalo-caudal principle. The three-month fetal infant's head and face is one third the total body length. At birth the ratio is one to four and in adulthood it is one to ten. There is

evidence that the newborn infant is more responsive to stimulation to the face and head than to other parts of the body. Pratt, Nelson and Sun reported that cold stimuli applied to the legs elicited extension and flexion, whereas the same stimulation of the forehead resulted in head movements, and acceleration in breathing and irregular pulse. Concurrent with this dominance is relatively early accomplishment of head movements, visual fixation, and eye-hand coordination and relatively late appearance of standing and walking. The limbs and muscles of the upper part of the body become functionally effective before the lower limbs. In walking, appropriate coordination of the arms precedes that of the legs. According to Cesell, the principle is well illustrated in the behavior characteristics of the twenty-week-old infant. His trunk is still so flaccid that he must be propped or strapped in a chair to maintain a sitting posture. When he is so secured, however, his eyes, head, and shoulders exhibit heightened activity and intensified tonus. The pelvic zone and the lower extremities at twenty weeks are, in comparison, very immature.

The head and face not only precede the other parts of the body in development, but continue to dominate other parts of the body by virtue of the relative density of receptor-effector units in the face.

Cohen examined drawings of a boy or girl made by 200 children from three and a half through five years and found the head most prominent and most clearly defined.

Bender in a series of studies stimulated simultaneously two different parts of the body and asked for reports. He found a tendency for some parts of the body to dominate other parts when both were stimulated simultaneously. By extinction he referred to the converse phenomenon, that the stimulus to the less dominant part is not perceived when it is in competition with the stimulus to the more dominant region. The phenomenon is most marked with patients with brain injuries and with children under four years of age. Normal subjects tend to correct their reports eventually and to identify both points of simultaneous stimulation correctly. The hierarchy of sensitivity he found was that the face was most dominant, the genitals next, then upper trunk, lower trunk, lower extremities and the hands least

dominant. About one out of two normal adult subjects point to the face on double tactile stimulation of the face and hand. In normal children there is a dominance of the face in over 90 percent of those tested. Bender found, however, that persistent face dominance in adults on repeated face-hand examination was indicative of severe disease of the brain. In such cases the patient feels only one of the two tactile stimuli even when he watched the application of the stimuli. If the simultaneous stimulation is sufficiently distinct the two stimuli may be combined, and both referred to the face. Fink simultaneously applied a tuning fork to the hand and a pin to the face. This was reported by patients with a brain disease as "a buzz and a stick on the cheek." When heat was applied to the face simultaneously with a pin prick to the hand it was reported as "a hot pin prick" on the face.

The relative density of neural representation and firing would appear to be the critical factor in such dominance. Because the amount of information conveyed from and to the face exceeds that from and to any other "terminal" this is the dominant organ and the most likely seat of "self"-consciousness. The body image is dominated by the face image. If it were possible to amputate the face and for the subject to continue to live, we would predict a phantom face of much greater longevity and resistance to deformation and extinction than in the case of phantom limbs following amputation. Phantom limbs may have an extraordinary longevity, up to thirty years following amputation. An after-life equal to the life span of the individual would seem a possibility for the continued awareness of the face in the hypothetical absence of a face, in view of its relative dominance over limbs in competition for awareness upon simultaneous stimulation and in view of its centrality in general.

Resistance to Habituation

The dominance of the face in affective responses may also be seen in the resistance to habituation of the facial components in an ensemble which includes many other organ systems. Thus in the startle response when the stimulus is repeated at intervals

of one or two minutes there may be habituation. If it is rapid, the subject may show the entire pattern the first time he hears the revolver shot and only the eye blink and head movement at the second shot. Usually habituation is slower. A typical habituation series, according to Landis and Hunt, is represented by a subject who has head, shoulder, upper arm, elbow, lower arm and trunk movement at the first two shots; all these plus knee movement at the third shot; head and upper arm movement at the fourth shot; only head movement on the fifth shot; and doubtful head movement at the sixth and last shot—with the lid reflex always appearing. They never found the eye blink lost through habituation and only rarely did the head movement disappear. To some extent this resistance to habituation is a function of the innate, involuntary innervation of the affective facial responses.

VOLUNTARY AND INVOLUNTARY AFFECT

It is not an uncommon phenomenon within the nervous system that the same organ is capable of multiple innervation and multiple inhibition. In general this enables more precise and graded control of each organ and also sensitivity to numerous other subsystems which may thus be represented in the behavior of any particular organ or system. Not the least important of these alternative types of innervation are those subserving voluntary and involuntary control of the same organ. It is almost always possible for the voluntary control to modulate the involuntary control mechanism and even to successfully imitate it, as in the voluntary control of breathing, which is ordinarily governed by involuntary innervations. However, it is also the case that the voluntary innervation of organs may not precisely duplicate the innate involuntary patterning of response. This seems particularly so in the case of affective facial expressions. It will eventually be possible to discriminate the difference between a voluntary and an involuntary smile by means of the high-speed camera as it was by Landis and Hunt in the case of the voluntary and involuntary startle.

When they instructed subjects to try to jump and startle to a revolver shot, the primary startle

pattern appeared directly after the shot, and then after an interval of some few thousandths of a second, there appeared a voluntary duplication of the response which was usually of greater extent than the original, primary response, and which was not always a correct imitation and contained gross exaggerations and inaccuracies of movement. Even with their high-speed camera, however, it was not always possible to separate these two movements since sometimes one merged into the other. The interval between the voluntary and involuntary startle was itself variable within one subject from time to time.

The distinction between facial movements which are voluntarily innervated and those which are not may also be observed in the sequellae of cerebral hemorrhage within the internal capsule. Such insult or lesion is usually unilateral and its effects involve the muscles on the opposite side of the body. The volitional movements of the lower part of the face are involved to a greater degree than those of the upper, e.g., raising the eyebrows and closure of the eyelids, the probable reason being, according to Best and Taylor, that the part of the facial nucleus governing the latter movements receive fibers from both hemispheres. When voluntary efforts are made to move the lower part of the face, as in showing the teeth, or pursing the lips, marked impairment of muscular power may be evident, yet emotional expressions, e.g., laughing, smiling or crying, though involving the same muscles may show little departure from the normal. According to Best and Taylor, a patient, though unable to raise the corner of his mouth when asked, may smile naturally a moment later. The impulses which elicit the smile and other affective responses apparently do not travel by the corticospinal pyramidal tract. Conversely, a tumor affecting one side of the thalamus in man results in unilateral emotional expression, although cortical control of facial muscles is preserved bilaterally.

HAND AND FACE

The centrality of the face in affective experience may also be seen in the relationship between the hand and the face. The hand acts as if the face is the

site of feeling. Thus when one is tired or sleepy, the hand commonly either nurtures the face, in trying to hold it up, to remain awake, or attempts counteractive therapy by rubbing the forehead and eyes as if to wipe away the fatigue or sleepiness. In shame, the hand is often used as an additional screen over the eyes behind which the face may be further hidden from view. In aggression which is turned against the self, the hand may be used to hurt one's own face by slapping it. Children sometimes claw their face with their fingernails. In surprise, the hand is commonly clapped to the cheek or over the forehead. The head or chin or cheek may be scratched when one is uncertain. In great joy, the hand is commonly placed on the forehead or cheek particularly when there is an element of surprise in the joy. In distress, one hand is frequently placed over the eyes and forehead and in extreme shock both hands cup the face and hold it up while it is weeping.

In addition to the classic finger in the mouth, in response to distress, there are numerous other types of assistance and reassurance which the hand offers the face. I have observed numerous public speakers immediately following the end of their speech sit down and nurture their face in different ways. The fingers may be used to gently rub the upper and lower lips in a circular motion which begins on one side of the upper lip, goes to the other side and then down to the lower lip and over to the other side and then to the upper lip to repeat this circuit. Whether this is the adult equivalent to head banging for the speaker who now keenly senses a separation from the audience with which he has just stopped communicating or whether it is a response to rejection which he may fear from the audience, or whether it is designed to remedy the cessation of the oral activity of speaking or all of these is not clear.

It is however clear that finger sucking, blanket sucking, head banging, and pacifiers are not altogether renounced by the adult, nor displaced entirely to cigarette smoking. Much of the "oral" complex is facial rather than strictly oral, just as some of the facial complex is in fact bodily rather than strictly facial.

Consider the head tics of the chicken. David Levy has shown that these tics are a response to a

restriction of free movement of locomotion and that the smaller the space in which the animal is reared, the more frequent these small compensatory head movements.

Much of the handling of the face is an attempt to deal with affect at the site where it is felt. Thus some individuals characteristically put their hand over their mouth as soon as they become angry, lest they bite or speak harshly. If one asks an individual why he rubs his eyes when he is tired, most respond that they are not sure, they feel like it, and it sometimes helps, that is, it makes the face feel differently. It would seem that the way in which this helps is by an increase and change in the stimulation of the face similar to the alerting consequences of cold water or a slap on the face of a sleeping or unconscious person. It is our argument that human beings slap, hide, stimulate, support, caress, inhibit or reassure their faces with their hands because they correctly localize the face as the primary site of their concern. This concern includes the mouth but is not an exclusively oral concern.

From time immemorial the face has been recognized as an organ of prime value and a site of great expressiveness, of great potency and of great vulnerability. In the chapter on the taboo on looking we will examine the historical evidence for the significance of facial affect. The faces of women have often been protected from view by the wearing of a veil. Face and loss of face still may symbolize general social status. No other part of the body has so captured the imagination of men. There is a voluminous literature from earliest antiquity which reveals an enduring preoccupation with the face, and particularly with the eye. The most ancient and universal belief is that the eye of an evil one will injure wherever its gaze happens to fall. As recently as 1948 the evil eye was still operating in a trial of a burgomaster in Germany. In a twentieth century witchcraft trial this burgomaster of Sarnau was accused of bewitching and killing cattle by looking at them.

The eye also has a long history as a handmaiden of love and sexuality, to arouse the other by ocular exploration and suggestiveness, and to protect from such looks by being turned away or by lowering the lids in modesty. In the chapter on the taboo on

looking we will trace the history of the role of the eye in human experience.

THE FACE OF OTHERS

Not only does our own face possess unusual properties but so do the faces of other human beings. There is good reason to consider the possibility that the faces of others might be an innate stimulus to at least two "social" affects, the smile of joy and the lowering of the eyes and face in shame.

Spitz has shown that any stimulus which has two eyes, is presented in full face and is in motion, even if it be a grotesque mask, will reliably elicit the smile by the time the child is three months old. (The smile is to be distinguished from the affect of interest. The young child who will look at a toy with great interest will not necessarily smile at it.) Second, Engel and Reichsman have described a behavioral pattern which they call the depression-withdrawal reaction which typically occurred when an infant was confronted by a stranger. This consisted in muscular inactivity, hypotonia, sad facial expression, decreased gastric secretion, and eventually a state of sleep. It vanished as soon as the baby was reunited with a familiar person. We regard this as a forerunner of the shame or shyness reaction which occurs somewhat later in childhood in response to either an actual stranger or when intimate personal interaction is blocked for any reason. The dropping of the eyelids and of the head has the consequence of reducing facial interaction. It appears to be primarily evoked by the strange or estranged face of the other.

Nonetheless, it is not our belief that the human face represents an innate and unique stimulus for either joy or shame. Rather, there seems to be a more general innate activator for each of these affects, which will be described in detail in the chapters on innate determinants of affects and affect dynamics, as well as in the chapters on joy and shame.

Roughly, this view may be summarized as follows. There are two distinct positive affects—interest-excitement and enjoyment-joy. Interest-excitement is activated by an optimal degree of

novelty or, in neurological terms, an optimally increasing gradient of density of neural stimulation. Enjoyment-joy is activated by a decreasing gradient of neural activation, such as is produced by the reduction of a negative affect, or as is produced by the reduction of the positive affect of interest-excitement.

Complex stimuli are extremely attractive to the human organism if they possess both sufficient novelty and sufficient familiarity so that both positive affects are reciprocally activated, interest-excitement by the novel aspects of the stimulus and enjoyment-joy by the recognition of the familiar and the reduction of interest-excitement.

The evolution of the human face, as we shall see later, has moved in the direction of increasing expressiveness through greater visibility of the facial musculature and of increasing differentiation both of the musculature and of the patterns of neural innervation. Thus, it seems to have been evolved in part as an organ for the maximal transmission of information and the information it transmits is largely concerned with affects.

The human face, therefore, is an extraordinarily complex stimulus, providing both novelty and familiarity, which is regularly presented to the human infant. Such a combination innately triggers interest, which is reduced by the recognition of the familiar, innately leading to the smile of enjoyment. The innate determinants of the affects of interest and excitement, and the evolutionarily developed characteristics of the human face, lead inevitably to the potency of the face as stimulus to positive affect.

The most general innate activator of shyness-shame seems to be an incomplete reduction of a positive affect. Thus, the very potency of the face as a stimulus to positive affect entails its potency as an activator of the shyness-shame response. The unfamiliar face produced interest and enjoyment in the anticipated familiar face, but these affects are incompletely reduced by the recognition of strangeness; the result is the lowering of the head in the shyness-shame response.

Man is a social animal. The presence of another face is rewarding in that it fulfills the innate conditions for positive affect. The absence of a rewarding

face, when such a face is expected, is punishing in that it fulfills the innate conditions for negative affect in which the head is lowered in shame.

The affective responses to the human face do not remain restricted to the positive affects and shame. The peculiar attractiveness of the human face, based on the positive affects of interest and excitement, sets the stage for learning. The information being transmitted concerns the affects of the other, which is vitally relevant to both the needs and the affective life of the infant and the child. Either on the basis of affective feedback from facial imitation or on the basis of the concomitant and consequences of affect in the other, one learns to respond with negative affect to negative affect on the face of the other, as well as with positive affect to positive affect on the face of the other. Such negative affect in response to negative affect may be reduced by the disappearance of the negative affect from the face of the other, or by the recognition that in a particular familiar face negative affect does not have dire consequences. In either case the reduction of negative affect innately leads to the smile of enjoyment-joy.

So great is our familiarity with the human face and so important is this information that its "constancy" is maintained despite the most extreme stimulus variations, as Ittelson, Slack and Engel have shown. Consider the face matrix of Wheatstone. The inside of a mask from very few feet away and viewed binocularly looks like the outside of the mask. The face looks normal despite this radical change in cues. Similarly if a human face is viewed through a pseudoscope such that the left eye receives the images normally given to the right eye, and vice versa, the face looks like a normal face. Engel has shown that if two similar faces are viewed through the stereoscope one to each eye, with one being upright and the other inverted, the typical report is simply the upright face. There is probably no single object in the world which is better known and in connection with which we achieve such perceptual skill as the human face—whether it is the face of the self or of others.

There are three basic reasons for such skill. First, the human face innately and by learning evokes intense and enduring affect. Secondly, it is an object with which all human beings have a great deal

of experience throughout their life. Third, it is the most complex object in the life space of the human being. The eyes, mouth and voice in concert are capable of emitting an extraordinary quantity of information at a bewildering rate. Further, its complexity is very much increased by the fact that in interfacial awareness each "sender" is also a receiver and so the larger pool of information in which any particular message is embedded and by which it is interpreted is the total set of facial responses sent, received and shared. This total set of facial responses shared in a dyadic relationship is also embedded in still a larger set which includes latent and unconscious motives, and social conventions about how directly affects may be expressed by the face, as well as inferences about the conscious strategy of the other.

The young human is at first necessarily selective when confronted with such a bombardment of information. However, because of the affective responsiveness of human beings to the face of others, because of the importance of the information communicated by the human face and because of the years of experience in interaction with human faces the individual is constantly challenged to organize this information in more skillful and efficient ways so that eventually he is capable of interpreting an extraordinary amount of information from momentary, slight facial responses. He learns the language of the face.

In this respect the skill involved in mastering the communications from the face involves the same principles which underly the attainment of all skills: first, motive, intense and enduring; second, practice, throughout much of the individual's life; and third, optimal challenge, which is a conjoint function of optimal complexity and motive. By optimal complexity we mean that the perfect skill is forever beyond the competence of the learner and so, as a goal which has not yet been attained, prompts him to improve his skill, but simultaneously discriminable small increments in skill are sufficiently attainable so that there is continuing reward from practice. Non-optimal challenge obtains whenever the skill reaches a plateau beyond which the individual is either not motivated to exceed because the level of attained skill is entirely satisfying, or beyond which

it is impossible to proceed because it is inherently too difficult and so discourages effort.

Despite the high level of skill ordinarily attained in the perception and interpretation of affect in facial expression, it is nonetheless a somewhat culture-bound skill. The individual who moves from one class to another or one society to another is faced with the challenge of learning new "dialects" of facial language to supplement his knowledge of the more universal grammar of emotion.

This skill in interpreting the facial expression of others is aided or hindered by an isomorphism between the visual face of the other and the interoceptive face of the self. Although the feedback from our own face is in non-visual modalities, we learn the rules of translation between what the face looks like to what it feels like and from both of these to the motor language, so that eventually we are capable of imitating either what a face looks like or what it feels like. In this way we become capable of putting on masks. These rules of translation are for the most part not explicitly formulated, but they are learned either involuntarily as when one smiles to a smile of the other, yawns to a yawn, becomes angry to anger, frightened to fear, saddened by the grief of the other, or, in a voluntary way, as when one self-consciously imitates a facial expression or dissimulates. These rules of translation between the motor, visual and kinesthetic languages are analogous to the way in which we learn to write as we listen to a lecture or read a book, or as a mute person learns to speak with his fingers.

Ordinarily our skill in perceiving and interpreting facial expressions of others is accelerated by this isomorphism achieved through rules of translation. However, this skill may be decelerated and grossly impaired just by virtue of this isomorphism. If parents unduly punish the facial expression of affect, or any particular facial affect, then this source of information may be lost to the individual as a guide to the perception of the same expression in others. Or he may be sensitized to its expression in others but defend himself against the perception in others as he has been forced to defend himself against affect. Thus he may avoid looking at a face which is in anger or in excitement, or he may avoid friendship

or contact with individuals with vivacious facial expressiveness.

The effect of this isomorphism is also reciprocal. Just as the interpretation of facial expressiveness of the other may be impaired by impairment of one's own facial expression, so the latter may also be impaired by parents and other models whose facial expressiveness has itself been inhibited, or who provide insufficient facial interaction. I have observed numerous instances of unusual woodenness and stolidity of facial expression in the case of children whose parents are also stolid and relatively immobile in facial expression. In these cases there is ordinarily a convergence of factors which produces the social inheritance of facial immobility. In addition to providing a model of stolidity, there is the absence of affective stimulation, negative sanctions for what is regarded as too excessive emotional display, and frequently a gross reduction in interpersonal communication. In general then there tends to be a circular reinforcement between parents and their children which accelerates the skill in interpreting both one's own and the other's facial expressiveness, or which decelerates or blocks the acquisition of this skill. In any event the skills of receiving and sending are intimately interdependent because the face one sees is not so different from the face one lives behind. It is easier to learn to read a language and not write it or speak it than to learn to read the affect language of the face without learning to send the same messages from one's own face and without learning to receive and interpret the feedback from one's own facial responses.

Paradoxically, it is the very existence of formal languages of communication by which the skill in learning the facial language of affect may be decelerated or blocked. First, the messages in the formal language of communication are sufficiently complex and urgent to reduce the visibility of the face in interpersonal interaction. An extreme instance would be the case of a motorist asking directions from a stranger on how to reach his destination. The spoken words under such conditions are figural, and the face which utters them may barely be seen, forming the vague diffuse ground along with trees and billboards along the highway. To the extent to which formal messages are salient in interpersonal

communication, awareness of facial affect may become secondary, and skill in interpretation may be undeveloped. The more factual or theoretical and the less personal messages between individuals become, the less likely facial affects are to be interpreted if communicated. It is not at all uncommon for two intellectuals to be furious each with the other but to be completely unaware of their disapproving faces as they attack, defend and counterattack on the ideational level. Second, as we have noted before, the affect may be hidden by being embedded in some other context constructed by language. When a mother, weary and harassed, reaches the end of her patience at the increasing noise emitted by her child who is also overly tired and irritable, and utters through clenched jaws a brief discourse on the nature of man and morality, she provides a cover of impenetrable fog over both her own irritability, otherwise clearly written on her face, and the child's distress evoked by fatigue, which might have been equally clear had the mother been less harassed. Instead of fatigue, distress and aggression responding to fatigue, distress and aggression, a philosopher-housewife is cast in the role of a peripatetic and the child in the role of an erring student. Under such conditions the mother does not see and is not seen, and the child is not seen and does not see his own affect or that of his mother. He has been caught up in one of the many variants of the myth of the hero and how he may become good. And yet the child is more often able to see the mother's affect than the mother is able to see the face of the child. As in the fable, the child is able to see that the king is naked because he knows no better. Before he has learned to clothe the immediacy of interfacial responses in the suits and dresses of formal language and philosophy, he is able to literally see excitement, fear, disgust, distress, shame, joy and aggression on the face of his mother and father when they may not be able to receive and correctly interpret the feedback from their own facial responses. In part this is also because contrary to the adult the child still stares into the face of others. More often than the child, the parent will believe what he is saying rather than what is emitting from his face. Language, of course, need not be the natural enemy of affect awareness. In poetry, drama and the novel, language is the

primary vehicle for the expression, clarification and deepening of feelings, but this role has in part been made necessary by the reduction in visibility of affects, effected by language which embeds, distorts or is irrelevant to affects and which thereby impoverishes the affective life of man.

THE FACE OF OTHERS IN SOCIALIZATION

The role of the face in socialization has yet to be intensively investigated. Preliminary investigations I have conducted reveal that many of the crucial early interactions between parents and children may be understood as face-face attraction and identification, or face-face repulsion and dread and avoidance. As an example, a number of male adults reported to me that they were sufficiently influenced by the sight of the face of their father at moments when he exhibited intense excitement and joy in the pursuit of his life work that the contagion of this experience prompted a very early decision to follow in the footsteps of the father. Others have reported the same type of experience later in life in connection with inspiring teachers. The point here is not that there was necessarily an intense personal relationship, but that the intensity of the affect as it was revealed on the face of the model was critical in the contagious activation of similar interest in the observer. On the negative side there are equally clear instances that the prime object of dread in childhood is not only the voice which later becomes the voice of conscience, but even more the face which frightens, shames and distresses the child.

Thus Aichorn relates the case of a boy who made faces at the teacher whenever reproved by him, which were simply a caricature of the angry expression of the teacher. The boy was unaware of this imitation. Anna Freud cites the case of a little girl who employed this mechanism more self-consciously. At home she was afraid to cross the hall in the dark because she dreaded seeing ghosts. Suddenly, however, she hit on a device which overcame her fear. She would run across the hall, making all sorts of strange gestures as she went. She explained her triumph to her little brother as follows: "There's

no need to be afraid in the hall, you have to pretend that you're the ghost who might meet you." I have treated children in whom it seemed clear that the dread of the angry, unloving, shaming face of the parent was so much greater than the dread of spanking and other punishments, that these punishments were sought by the child to reduce the dread of the disapproving or frightening face. Since the face of the parent is more loving following the discharge of aggression, some children provoked this discharge of aggression via a more harmless channel such as being sent to his room, or being spanked, so that they are spared the dreaded facial interaction while the parent expresses his displeasure, and also guaranteed a period of freedom from facial attack for a period of time following the punishment.

THE FACE OF THE OTHER AS A GOAL

The voice of conscience I am suggesting is the voice of a particular face who, in addition to speaking, is angry or shocked or disgusted or disappointed. These various negative affects reflected in the faces of parents constitute the negative facet of conscience. They are matched by a set of smiling, loving, admiring, interested faces. The child's task is in part to learn to evoke the positive faces and to avoid evoking or seeing the negative faces. Not only is the child confronted with the task of maximizing positive facial interaction and minimizing negative facial interaction, both within the inner self in imagination and in fact, but the adult also, on close examination, appears to be held in the grip of imagined past and future facial interactions. Much of the dread as well as the magic of the adult imagination, his deepest fears and the exciting hopes which govern and give direction to his life, revolve about imagined look-listens between the self and others. The adult is characteristically both unable and unwilling to verbalize his deepest goals in such terms partly because he has learned to describe his goals by words which his society deems appropriate and through which social consensus is attained. It is just this lack of fit between the universal facial goals and the socially inherited labels and descriptions

of men's goals which can produce confusion about what one is striving for as well as produce that paradoxical confusion and depression which Jung first described—the defeat and apathy of those who have “succeeded.” I am arguing that, no matter how much the human being may invest positive affect in impersonal goal attainment and no matter how much of his negative affect is invested in coping with threats from the impersonal environment and with threats from and to his body, unless he is completely autistic by virtue of early isolation from human interaction, he will necessarily also have major goals, positive and negative, which can be understood as affect-affect interactions between human faces.

We will examine the varieties of look-listen goals in more detail in another volume. At this point we will consider briefly the general nature of these goals. These may be wishes for future affective interactions of positive communion such that the person should share positive affect with another as: *smile-smile* (we like or love each other, or something else in common) or *excitement-excitement* (we are excited by each other or some other person, object or activity in common). There are also communal mixed affective goals such as *distress, anger-distress, anger* (let us protest bitterly what is troubling us). There are numerous non-communal mixed affective goals such as *distress-smile, distress* (love me and sympathize with me for I suffer). There are also negative facial interactions which are goals in the sense that they are to be minimized and avoided if possible and to be escaped if caught in them. Such interactions may be of the form *smile-frown* (if I am friendly he is hostile) in which the person initiates the dreaded sequence or of the form *X-frown-fear* (if he frowns at me I will become afraid) in which the other person initiates the dreaded sequence.

FACIAL STYLES

These positive and negative facial interaction goals are not necessarily often seen by an observer. They characteristically are embedded in and generate what we have called *facial styles*. These may represent the enduring affect which is a consequence

of either past goal attainment or deprivation. Thus a face may be permanently sad or distressed because of continuing deprivation of a wish for the communal excitement-excitement interactions. Similarly the individual's face may appear primarily in continuing excitement because he has in the past frequently attained his goal of smile-smile interaction. These may represent his dominant facial affect interaction goal, and frequent past attainment generates the facial style of continuing excitement, as a resultant. Facial styles are also generated by expectations of characteristic instrumental sequences which aim at the attainment of positive facial affect goals or at the avoidance of negative facial affect goals. Thus a face may be characteristically lowered in shame, with lowered eyelids because of expected failure in the attempt to evoke a positive affect sequence. The individual may not wish to feel shame—it is simply a consequence of the expected failure to achieve the positive goal. A face may be characteristically friendly because of the enduring expectation of success in evoking a particular positive affect sequence. A face may be characteristically fearful in expectation of failure in avoiding dreaded negative sequences, whether initiated from within or without. Thus an individual may be characteristically fearful lest he become aggressive which will evoke counter aggression. In short, the facial style may represent fragments of facial goals, reactions to past success or failure in achieving these goals, and reactions to the expected outcome of instrumental behavior in pursuit of future facial goals. These distinguishable components may in combination produce a resultant facial expression which is difficult to identify since it represents part goal, part expectation of outcome of instrumental activity, part reaction to the past, part reaction to the present and part expectation of the future. It is not infrequent that a face is half sad from past distress and half excited at future prospects.

The interplay between the relatively fixed and transient affects is not unlike that between a melody and its variations amidst counterpoint. Despite the complexity of such relationships they are usually sufficiently invariant to be capable of being observed and analyzed. Language interaction is usually so demanding and obtrusive that few individuals

may penetrate the linguistic envelope to isolate the idiosyncratic style of the face of the other during conversation. For the student of affect, however, if he will turn off the flow of information from linguistic interaction and attend simply to the face of the other, there is immediately revealed an astonishingly personal and simple style of affective facial behavior. This can easily be done by turning off the sound of any unrehearsed television program. For example, one individual as he is spoken to, nods his head quickly, yes, yes, every four seconds and then after a dozen of such pairs of affirmation begins to speak with a somewhat blank expression which is punctuated by a small, brief smile, or if the sentence takes longer to complete there will be a wider, longer smile as though a smile debt had accumulated over the longer interval. Another individual's face may be frozen in perpetual surprise with wide open eyes, raised eyebrows and slightly opened lips. When spoken to, his interest is shown by a slow rhythmic nodding of the head which is continuous so long as psychological contact is maintained, but shifts abruptly to a sudden pulling back of the face and a slight raising of the upper lip in contempt. Contact is then usually re-established and the head moves forward again slowly and the rhythmic affirmative nodding increases in amplitude until the opening pattern is repeated. I have observed such sequences to be repeated twenty times within an hour.

These styles represent resultants of quite complex components. At this point we wish only to call attention to the existence of facial styles which are both as unique as the style of a composer, as complex and as invariant. Their relationship to the underlying personality structure we have reason to believe is intimate and important.

THE FACE AS THE ...