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## Biological Necessity, Emotional Transformation, and Personal Value

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Anyone who honestly surveys the past hundred years of work on the emotions must surely experience both humility and impatience. The sheer volume of the literature is overwhelming. Shibles's (1974) general bibliography lists about five hundred studies while Hillman (1961), who concentrates on the theoretical literature, refers to over five hundred studies which are largely *different* from those listed by Shibles. When we turn to the various specialties within the field, the literature becomes a quagmire. Izard's (1971) bibliography of work relevant to the facial expression of emotion, Arnold's (1960a, b) account of the relevant physiological literature, Bandura's (1973) account of the work relevant to aggression, each lists over five hundred different references; and one can only speculate as to the number of completely different references to love, to fear, or to emotion within the psychoanalytic literature. Furthermore, while much of this work has merit, many investigators seem either to ignore or misunderstand the work that preceded their own, and many theories seem quite unrelated to either the facts or to other theories. Hence, we have a situation such that Hillman's careful delineation of theories requires the presentation of eighteen different *types* of theories of emotion. (There are over a hundred distinguishable theories and definitions of what an emotion is.) In order to see what we have learned about emotion, we must select, and this very selection

may blind us to other visions. In defense of my own portrait of this complex field, I can only plead my dedication to its subject matter and my commitment to an inclusive rather than a narrow vision.

### An Historical Approach

If we ask what has been learned about emotion from a detached historical perspective, we may note at least four major theoretical traditions which have evolved. The important facts about emotion may usually be related to one of these theoretical viewpoints. Since any attempt at synthesis must necessarily abandon historical detachment, let us begin by reviewing these four approaches.

#### *Emotions as Functional Patterns of Behavior*

The first tradition focuses on emotion as functional behavior that enables the organism to adapt to its environment. For example, Darwin's (1872/1904) classic work treats emotional expression as related to adaptive behavior. He suggests that the facial expression of sorrow, which involves the contraction of muscles around the eyes, may function to prevent hemorrhage during severe crying. Likewise, although concerned with physiological rather than expressive processes, Cannon (1915, 1927, 1939) takes the same general stance when he conceives of emotions as thalamic processes which involve the body in maneuvers that are adaptive for fight or flight. Today, evidence requires us to add the hypothalamus and limbic system, and to see portions of the neocortex as playing an excitatory rather than inhibiting function. However, the basic idea remains the same—emotions are seen as patterns of adaptive behavior which are controlled by the central nervous system. (The fundamental developments within this area have been well reviewed by Arnold [1960b]; see also Delgado [1966].) In a similar manner, when dealing with purposive behavior, McDougall's (1908/1923) focal idea is of a central emotional mechanism whose adaptive character has been determined by natural selection. McDougall had a conception of these "instincts" as central mechanisms linked to the environment by flexible afferent and motor components which were open to learning and imprinting. In fact, it may be shown (see de Rivera, 1977, pp. 130-134) that McDougall's "instinct" is a hypothetical construct with complete formal similarity to Cannon's thalamic activations and Marston's (1928) "central motor responses," as well as to intervening variables in learning theory such as the "fear" proposed by Miller (1951) and the various emotions proposed by Mowrer (1960).

In contemporary theorizing, there are some important variations within this general functionalist tradition. For example, in Tomkins's (1962) theory, emotions amplify rather than produce drive stimuli, providing positive or negative signals which we work to obtain or avoid. Thus, his central emotional states do not

motivate particular behavioral response patterns (with the exception of facial expressions); rather, they regulate behavior indirectly by their reinforcing effect. Nevertheless, the major features of the functional-mechanistic approach are maintained—that is, the theorist proposes a relatively small list of basic emotional mechanisms that function in an adaptive way. Plutchik (1980) has attempted to use this approach to synthesize different work on emotions, abstracting eight prototypical patterns of adaptive behavior that may be applied to all animals and related to specific "primary" emotions.

This tradition's concern with recognizable patterns of response has been the basis for a series of empirical investigations on facial expressions (see Ekman, 1971; Izard, 1971; Eibl-Eibesfeldt, 1973). These studies have established that there are at least a few expressive patterns (e.g., the smile of happiness) that are recognized in widely diverse cultures. The approach has also served as a way of comprehending a number of observations of emotional phenomena that have occurred in connection with investigations into the central nervous system. For example, behavioral patterns such as the attack or flight patterns elicited in cats by stimulation of the hippocampus (Kaada et al., 1953) and hypothalamus (Gloor, 1954), or the impulsive aggressive behavior exhibited by humans with tumors in the midbrain or temporal lobe (see Poeck, 1969) or subjected to subcortical stimulation (see Delgado, 1969). Work within this tradition reminds us that there are recognizable patterns of emotional behavior, that these response patterns have an impulsive deterministic quality, and that many of these seem of a basically functional nature.

Since theories within this tradition relate emotions to recognizable patterns of behavior, they focus on the deterministic, impulsive aspect of emotional reaction as it involves the organism with its environment. Thus, Zajonc (1980) emphasizes the independence and immediacy of affective preference. This energetic quality is sometimes contrasted with the structural quality of cognition, as Plaget (1954) does when he attempts to relate affectivity to intelligence. However, we find a second theoretical tradition which asserts that emotions are best regarded as a form of knowing.

### *Emotion as the Appraisal of Value*

Theorists in this tradition argue that while emotions may sometimes involve organized behavior patterns, the different emotions are basically ways of assessing whether an object in the environment (or our own action) is good or bad for us. Rather than viewing the organism as adapting to the environment by means of a reactive set of central emotional mechanisms, they assert that the organism, or at least a person, adapts emotionally by means of an overall appraisal of the situation. It is this appraisal (and its consequent reaction) that is experienced as emotion and, hence, the appraisal of value is an essential aspect of emotion. Further, since this appraisal is an *act* (rather than a stereotypical response), emotion is seen as having

an active component rather than being simply a reactive mechanism. The history of this viewpoint, from the thinking of Aristotle to the experiments of Michotte (1950), has been summarized by Arnold (1960a), who suggests that it is the intuitive appraisal of our situation which initiates the action tendencies experienced as emotions.

Of course, there are variations on this theme. Angyal (1941), for example, asserts that our experience of an emotion is actually a *symbol* for our welfare within a given situation, and Solomon (1977) stresses that emotions involve judgments which actually *constitute* what is valuable. And there are expansions of the theme, as when Chein (1972) proposes that some emotions are assessments about whether one's own activity is or is not successful; when Bowlby (1969) points out that emotions as appraisals also help the self monitor its own behavior and communicate the welfare of the self to others; and when Lazarus (1970) suggests that the appraisal of one's situation includes an evaluation of what actions might be taken. Nevertheless, all of these theorists seem to be in essential agreement.

An important advantage of this approach is that it relates affect to perception in a way that prevents an oversimplistic separation of affect and cognition and encourages research into emotions and feelings as ways of knowing. On the one hand, we may speak of "correct" and "incorrect" emotions in much the same way as we distinguish between true and false ideas (that is, according to whether or not they correspond to objective reality). Thus, Macmurray (1935) points out that a feeling of love is correct to the extent that it reflects a person's genuine concern for the other and is mistaken to the extent that the person is really concerned for the self. On the other hand, to the extent that emotions do enable us to assess situations, we would expect emotions to be useful in what are ordinarily regarded as "cognitive" tasks. Several recent studies support this idea. For example, Sommers (1978) shows that those subjects who use more emotion terms (when telling a story) give more adept performances on a cognitive role-taking task. And Hoffspiegel (1980), using an impression formation task, shows that when persons respond affectively, they are less likely to be fixated on primacy effects. (Subjects who were asked to report their feelings in addition to their cognitions were able to adapt more rapidly to changing information about the target of their perception.)

### *Emotion as Self-Perception*

A third, quite different, theoretical tradition has focused on emotion as involving the perception of bodily cues. James (1890/1950) and Lange (1885/1912) advanced the position that an emotion is simply our perception of the bodily changes aroused by our reactions to situations. While both James and Lange postulated that the feedback came from the skeletal musculature and the viscera *after* the body reacted, Bull (1951) has suggested that felt emotion must also include feedback from the person's postural attitude, from the *readiness* to act. Evoking different emotions

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under hypnosis, she demonstrated that definitive postural patterns were produced. Recent experimentation has taken the direction of producing different bodily patterns and then demonstrating emotional affects. Brown (1977) has shown that when subjects are asked to hold their heads in different positions, they report different emotional reactions. Laird (1974) has shown that facial expression can affect what emotion is experienced, and Lowen and Lowen (1977) have developed a number of different expressive exercises that may be used therapeutically to evoke different emotional reactions.

While it has been possible to specify a half dozen different bodily response patterns, the number of these patterns is nowhere near the number of emotional experiences which the average person can distinguish (we have about four hundred emotion names in English). Consequently, Schacter and Singer (1962) have suggested that in addition to bodily cues, persons may use situational cues in labeling their emotional state. Subsequently, rather than believing that felt emotion is simply sensory feedback from the body, self-attribution theorists (e.g., Laird and Crosby, 1974) have taken the position that emotional experience is inferred or constructed from an array of both bodily and situational cues. While the work stemming from the first two theoretical approaches suggests that there is much more involved in emotional experience than bodily and situational cues, work in this third tradition has clearly established that emotion is always embodied and may often be influenced by altering body position, facial expression, and autonomic functioning.

### *Emotion as an Alternative to Action*

A fourth theoretical tradition has been primarily concerned with when emotions occur and with their relationship to action. Since behavior, appraisal, and bodily changes are going on all the time and yet we do not continuously experience emotion, emotions must not simply be behavior patterns, or appraisals, or bodily and situational cues. The theorists in this tradition argue that emotions must involve some disturbance of normal action. However, this disturbance may be conceived in quite different ways. Pauthan (1884/1930) suggested that emotion occurred whenever the quantity of psychological energy was too great to be used in systematic behavior, and the early psychoanalytic tradition tended to adopt an analogous view. Rapaport (1942) postulated that when unconscious instinctual energies were not free to discharge in voluntary action (e.g., when instinctual demands conflicted with one another or the demands of reality) their energy would be discharged as emotion. As a person developed emotional control, affective discharges would not be as overwhelming and could be used as signals of impending distress or of one's general condition. Such a model accounts for some of the aspects of emotionality that are observed clinically, such as emotional ab reactions and

floorings (see Volkan, 1976). However, there are a number of serious objections to such an energy model (see Bowlby, 1969, pp. 18-21).

A related model that may be easier to defend was proposed by Dewey (1895). He argued that whenever a situation automatically elicited a single behavior pattern, no emotion would be aroused. However, if a situation elicited a number of different possible responses, a conflict would ensue. If, for example, the situation suggested a desirable end which might be reached by some alternative behaviors, then action would have to be inhibited until the most adaptive action was selected, and there would be a tension between the various possible actions and the ideal, imagined end. For Dewey, it was this tension or adjustment that was experienced as emotion; and thus emotion, though born of conflict, was what freed the organism from simple automatic responses. This basic idea—that conflicting alternatives and imagination lies at the heart of emotion—has been advanced by a number of thoughtful investigators (e.g., Angier, 1927; Bartlett, 1925; Nahn, 1939) and keeps reappearing. However, for some (nonobvious) reason this line of theory has not led to much research. An exception is Luria's (1932/1960) little known experimental work on affect as a form of behavioral disorganization.

Yet a third variety of theory within the "blocked-action" tradition has been articulated by Sartre (1948), who suggests that consciousness becomes emotional when a person finds it impossible to act within the world. At such an impasse, consciousness returns to a more primitive attitude and envisages a magical, non-deterministic world in which the person is no longer so separated from objects. (For example, a person who suddenly sees a strange face pressed against the window may experience a surge of horror which completely ignores the fact that the window is between him and the face.) It is interesting to note that a more recent model that is couched in neurological terms (see Pribram & Melges, 1969) is formally similar. Emotion is postulated to occur when organized behavior is disrupted by the failure of the person's plans within the perceived situation. This failure disequilibrates the neural system (the "plan" of action). Just as Sartre's emotion magically changes one's world to reduce tension, Pribram's emotions equilibrate by regulating the stimulus input to the system (that is, how the world is perceived). (For a more detailed discussion of these theories and their similarities, see de Rivera, 1977.) Note that in these theories the emotion does not function by leading to a patterned response but by transforming perception. In a somewhat different vein, Mandler (1975) suggests that the interruption of organized behavior arouses the autonomic nervous system, stimulating a reevaluation of the situation. As in the Schacter and Singer (1962) model, the emotion which is experienced is the result of both the autonomic arousal and the cognitive interpretation.

Theories in this tradition keep raising disquieting questions as to the exact condition under which emotions occur, how emotion is precisely related to action, and how emotion systematically functions in a person's life. While there are not many

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systematic empirical studies which are based on these theories, numerous clinical and introspective observations may be related to them. To some extent, they are also supported by the evidence that links emotion to imaginative activity (see Hillman, 1961), or that relates emotion to primary-process thinking. For example, if the TAT stories of persons waked from deep sleep are compared with the stories of persons waked in the midst of a dream, the former are sparsely pragmatic while the latter are laden with affect. Thus, the imaginative, primary-process mode may exist in the waking state and influence the perception of situations (see Fiss, Klein, & Bokert, 1966). In this vein, consider the fact that prefrontal lobotomy diminishes both imagination and affect, or Hebb's (1954) important observation that emotionality appears to increase with cortical development.

At this point we could continue with our objective survey and become involved in some interesting historical questions. For example, how did Cannon's vigorous (and largely successful) experimental attack on the James-Lange theory result in keeping the theory alive while Dewey's untested (and possibly more viable) theory passed into history for lack of interest? Or what demands of method, theory, and scientific acceptability have led so much recent research on facial expressions to focus on the use of only six highly selected expressions, in spite of the fact that Duchenne (1862) gave detailed descriptions of how the electrical stimulation of isolated groups of facial muscles created the appearance of over twenty different emotional expressions? However, since I am a theorist rather than an historian, I distrust my ability to be historically objective and prefer to attempt a synthesis of the four theoretical traditions I have just outlined.

Since it would be impossible to achieve a true synthesis of such disparate traditions from a position of historical objectivity, I shall have to abandon a detached perspective in order to assert a new theoretical position. However, I shall take care to show the historical roots of this new position and, once it is developed, attempt to show how it may be used to subsume the theories and data we examined earlier.

### Emotions as Transformations

Back in the early 1920s, Stumpf asked Kurt Lewin to bring will and emotion into the laboratory, to try to submit these phenomena to experimental investigations. And although Lewin's later work had an immense influence on psychology, this earlier work has been rather ignored. To reduce a brilliant series of experiments and hundreds of pages of data to a paragraph, Lewin (see de Rivera, 1976) demonstrated that when a person *wills* something—that is, when he intends to perform some action—his will operates in much the same way as a need operates, if by "need" one means something very similar to one of Dr. Bindra's central motive states (see his chapter in this volume, pages 338–363). That is, the intention system does not passively lie in wait for some stimulus to trigger it, nor does it directly motivate

consummatory action; rather it either searches for the necessary stimulus conditions or influences the perception of objects in the environment so that objects acquire a "valence" or "demand character" that controls the person's activity. Thus, if we intend to mail a letter, a mailbox will catch our attention and exert a field force in its direction. Intentions, like needs, transform our environment so that consummatory activity may occur. Conceptually, Lewin represented both an intention and need by the same construct—a tensed region within the person.

Of course, there are times when the environment appears to have a will of its own—the chair entices us to sit down, the cookie to eat it, the nice day to take a walk. For Lewin, such valences were, in fact, related to the person's own needs—his or her fatigue, hunger, restlessness—or, in the case of "induced" valences, to the will of some authority figure. In all cases, he believed there was an intimate link between environmental valence, need, and activity. Indeed, as the experimental work progressed, Lewin became convinced that the basic unit of psychology, the actor who behaves, was not really the person or organism which we ordinarily conceive but, rather, a "life-space"—a Gestalt unit of action that included both the person and the person's environment. Behavior was a function of the overall state of the life-space and might consist of either a "locomotion" of the person within the life-space or a restructuring of the life-space.

Continuing this analogy between intended activity and need, Karsten (1976), one of Lewin's students, showed that intended activities *satiated* in much the same way needs do. That is, if a subject is asked to repeat an activity, he or she gradually begins to change it—to introduce variations—and if these variations are prevented, the activity disintegrates, the subject stops the activity and literally cannot go on. In addition to working with complex activities such as reading poetry, Karsten used simple repetitive tasks, such as making repeated short strokes with a pencil. She shows that pleasant tasks actually satiate more rapidly than neutral tasks; the more the person is involved with the activity, the more rapidly satiation progresses.

While Lewin never proposes a theory of emotion that may be compared with his theory of will, one of his students, Tamara Dembo (1931/1976) succeeded in synthesizing an emotion in the laboratory—the emotion of anger. It should be noted that most experiments on emotions do not really *synthesize* an emotion, they merely *instigate* an emotion by, for example, insulting or threatening a subject. Such a procedure tells us very little about the nature of emotion. Dembo, however, consciously constructs a field of forces which leads to the development of anger. First, she involves the subject in a task: she seats each subject on a chair within a rectangle and asks him or her to obtain a flower from a nearby vase which is just out of reach. (The instructions make it clear that both feet must remain within the rectangle.) After an initial success (the subject discovers that the flower can be reached by leaning upon the chair) the subject is asked to discover a second solution and runs into a barrier—for there is no second solution and, hence, the goal cannot

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be reached and the person is frustrated. Contrary to the frustration-aggressive hypothesis, there are no signs of aggressive activity at this point, rather the subject simply turns away from the activity and attempts to assert that there is no solution and that he or she is ready to leave.

Dembo prevents these attempts to leave by creating an "outer barrier" that imprisons the subject in the situation: she insists that there is a second solution and she is sure it can be discovered by the subject. The only possible escape route requires the subject to return to attempts to reach the blocked goal. Now, the subject begins to experience increased frustration, and the situation becomes oppressive and filled with tension. Dembo details how the person then attempts to escape the field of force by moving up to a level of fantasy where barriers do not exist and wishes can come true. Ultimately, however, the person must return to the level of reality, where tension continues to accumulate. This tension begins to obliterate the various boundaries within the field: the boundaries that distinguish between the real goal and an easy substitute (a nearby flower that is easily reached but is not the real goal and will not provide a real escape), between the level of reality and the level of fantasy, between what is private and what is public. Consequently, subjects begin to engage in minor irrationalities—finding themselves holding the nearby flower, thinking that perhaps they really *can* do an impossible feat (such as hypnotizing the flower), telling the experimenter something that is really too personal to share, and so forth. Subjects struggle against this process, but the tension continues to mount until the field becomes homogenized and the boundary between the self and the environment can no longer be maintained. At this point in the experiment, some trivial event (a smile, a cough) will suddenly be perceived as a provocation and the subject explodes with anger.

It should be noted that Dembo describes the development of an emotion by describing a transformation in the subject's overall life-space rather than simply a change within the person. Thus, rather than a region of tension within the person transforming the situation (as in the case with will or need), we have the situation itself becoming filled with tension and transforming the person. And rather than locomotion within the life-space, we have a restructuring of the field. In fact, Dembo suggests that the intensity of an emotion is best conceived in terms of the emotion's ability to transform the person's life-space.

When Koffka (1935) reviews Dembo's work, he fully accepts the idea that emotions should be conceived as dynamic organizations but (I believe mistakenly) suggests that they are related to states of tension *within* the ego. However, when he discusses physiognomic character—"the horrible, the majestic, the enchanting"—he proposes that these qualities occur when a state of tension exists *between* the object and the ego, and that the type of tension determines the response, "attack, flight, approval, succourance." In fact (I believe correctly) he contrasts this physiognomic character with the demand character described by Lewin (where the valence depends on tensions *within* the person part of the life-space—viz., will or need). I

would like to propose that Koffka's description of the physiognomic field is actually a good description of emotion. That is, emotion involves a physiognomic transformation of the life-space, and each different kind of emotion involves a particular type of dynamic tension between the object and the person, a dynamic which produces the particular transformation. As we continue, I hope to show that the particular details of these different transformations may be specified with a considerable degree of precision. Such transformations coincide with a dissolution of the boundary which separates the ego from other aspects of the life-space so that, as Koffka implies, the field is unified in a way that reduces the overall tension in the field.<sup>1</sup>

Dembo's study portrays emotion as occurring when the field is unified by increasing tension and the destruction of boundaries. That this is not necessarily the case is shown by Reichenberg (1939), who was inspired to try a positive version of Dembo's experiment. She gave her subjects, who were school children, one of the activities with which Karsten had demonstrated satiation effect. She asked them to make repeated strokes with a pencil and, of course, after a couple of pages the children wanted to stop. She then gave the children an emotional experience which she labels "joy." She led the children to a treasure-chest where they became involved in the challenge of opening the lock. After a protracted struggle, but before any discouragement occurred (she could manipulate the device so that the child was always successful), the child succeeded in opening the chest. There, inside, were candy and toys—which the child could keep—and all the children exhibited positive emotional behavior. After about ten minutes, the experimenter again asked the children to do the activity on which they were previously satiated. In thirty-four of thirty-five cases, the children produced more strokes than they did before—and better quality strokes. They produced page after page of carefully done marking. Particularly convincing is the photographic reproduction of the work of one child who had a behavior disturbance and could only make scrawls before the emotional experience. After the experience, his marks are distinct marks—the emotional behavior has clearly transformed the field in a way which unifies and organizes behavior.<sup>2</sup>

Our account of emotional transformation is not restricted to persons. Rather, I believe that we must recognize the existence of patterns of emotional transformations in animals as well as human beings. I do not mean the sort of mechanistic phenomena the ethologists study (releaser stimuli and the like); I mean full transformational patterns of behavior. (This is not to say, of course, that animals are

<sup>1</sup> Such a view is compatible with Werner's (1948) view of physiognomic perception, with Angyal's (1941) organismic theory (where emotion involves a reunification of the ego with portions of the self from which it has been separated) and with Hillman's (1961) Jungian theory (where emotion occurs when the object of the emotion is a symbol that unites conscious and unconscious processes).

<sup>2</sup> I do not know of a single citation to this study. How can the results be explained by any of the traditional theories, and what happens to results which we cannot explain?

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conscious of these patterns as we human beings are.) Of dozens of naturalistic accounts that could be given, consider the following account by John Muir (1916), certainly a careful observer.

Muir was on an Alaskan expedition, and one of his companions brought along a dog named Stricken, who had a rather aloof character structure—a loner who went his own way and exhibited little attachment behavior and no emotionality. Muir states, "He sometimes reminded me of a small, squat, unshakable desert cactus." One day a storm developed, and Muir and the dog became trapped on a sort of glacial island that was isolated by deep crevices. The only way off the island was by a narrow ice bridge, which Muir managed to straddle over but could not get the dog to cross. The dog *might* make it across safely. Now Muir encourages him to try, but for the first time the dog shows fear—highly justifiable fear—howls despondently, and refuses to try. Muir pretends to leave—but, of course, the dog does not budge. Finally, Muir *has* to leave, and once the dog knows that Muir is really going, he makes the attempt. He creeps across the bridge, leaning into the wind, and finally arrives at the toughest point, the upward slope to the top of the crevice. While Muir is wondering how he can possibly help, the dog observes every detail of the ascent and, suddenly, scrambles up to the bank in one burst of perfectly coordinated energy. He has succeeded! He is alive!

Muir writes, "Never before or since have I seen anything like so passionate a revulsion from the depths of despair to exultant, triumphant, uncontrollable joy. He flashed and darted hither and thither as if fairly demented, screaming and shouting, swirling round and round in giddy loops and circles like a leaf in a whirlwind, lying down, and rolling over and over, sidewise and heels over head, and pouring forth a tumultuous flood of hysterical cries and sobs and gasping mutterings. When I ran up to him to shake him, fearing he might die of joy, he flashed off two or three hundred yards, his feet in a mist of motion; then, turning suddenly, came back in a wild rush and launched himself at my face, almost knocking me down, all the time screeching and screaming, and shouting as if saying, 'Saved! Saved! Saved!' Then away again, dropping suddenly at times with his feet in the air, trembling and faintly sobbing."

Later, Muir observes, "Thereafter Stricken was a changed dog. During the rest of the trip, instead of holding aloof, he always lay by my side, tried to keep me constantly in sight, and would hardly accept a morsel of food, however tempting, from any hand but mine. . . ."

Note that again we see emotion as a complex transformation of the entire life-space with subsequent effects on the organism's behavior. A search of the experimental animal literature does not reveal many investigators using emotion names—except as cautious labels for intervening variables. However, Crespi's (1942, 1944) studies are a notable exception. Crespi unexpectedly increased (or decreased) the amount of the reward his rats were used to finding at the end of a straight alley maze. He showed that there was an immediate impact on their running speed and

refers to their degree of "eagerness," to their "elation," their "frustration" and their "depression." Crespi specifies the behaviors involved and I would like to encourage the description of such transformational patterns of behavior with careful attention to exactly what labels are used.

### Specifying Transformational Structures

I believe that emotion names are just as useful as, say, tree names. There is a difference between a maple and a spruce. The leaves differ, the bark differs, they grow in different conditions, the former's wood is harder to cut and burns longer. Our names for these trees refer to these very real differences. In the studies conducted by me and my students at Clark and at New York University (see de Rivera, 1977), we took advantage of the English language in order to specify the exact nature of the transformations involved in different emotions. We postulated that there is a different transformational structure for each emotion, and, thus far, we have been able to specify these structural wholes in terms of four interrelated parts. Each emotion involves: (1) a specific situation with which the person must deal (the perception of this situation is actually a part of the emotion, a transaction between the person and the environment which gives physiognomic meaning to the situation and, hence, is part of the transformation the emotion affects); (2) a particular transformation of the person's body and the manner in which the self relates to the environment (this is a direct emotional response to the new situation); (3) a specific "instruction" as to how the person should behave or transform this new situation (this instruction is experienced as the impulse or motivation of the emotion); and (4) a unique way in which these transformations advance the person's values.

As an example, let us consider the four parts of the structure of the emotion of anger. (1) The situation is transformed into one in which the person experiences a *challenge* to what the person believes *ought* to exist. This challenge is experienced as stemming from the will of an other who is held responsible for the challenge. (2) The transformation of the body involves a stiffening of the person's own will. (3) The emotion's instruction is to remove the challenge. (4) These transformations serve to protect the person's values (what ought to exist) and to preserve the integrity of the relationship with the other.

For every emotion we have studied to date, we have had remarkable success in specifying such structures in a way that differentiates the particular emotion from others and makes clear its particular set of transformations. Let me give just one example, a study by Lindsay-Hartz (1975) which examined the differences between elation, gladness, and joy.

One might think that persons use such words unreliably—that they all just mean "good." But, in fact, relatively educated persons—that is to say, college students—use such words quite precisely. They know exactly when to say "glad" although, of



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course, they cannot themselves specify how they are able to use the term. When we ask a person to give an example of a time when he or she felt elated, we find that the experience is structured quite differently than it is in times of gladness or joy. What are these structures like?

Elation occurs when our mundane world is jarred by the unexpected fulfillment of a wish. Wishes operate on a fantasy level—the level of unreality we discussed earlier in the Dembo experiment. When a wish comes true, it appears that the person has to go up to the level of unreality in order to realize that the wish has come true—otherwise the wished for news is too good to be true. Hence, one of the transformations of elation involves the experience of being lifted (as might be suspected from the etymology of the word). Nor is this description loosely metaphorical. While, of course, the person's body does not literally go off the ground, the person's behavior is literally transformed. Thus, if a student who has just received a high mark is asked to establish the height of a horizon line that is directly opposite to the eyes, he or she will set the line higher than will the nonrelated person (Wapner, 1957). And elated persons go out of contact with the mundane reality in which the rest of us remain. If you have ever tried to talk with a person who is "high," you will recognize the phenomenon—there is often a grin on the face and the person cannot seem to hear what you are trying to communicate. In fact, the person is too busy telling you about the wonderful thing that has happened—for the wish or impulse of elation is to announce the person's new position. And this announcement is in the service of elation's function—to help the person realize his or her transformed situation.

In gladness, on the other hand, we find that a *hope* has been fulfilled. Now unlike wishes, hopes are grounded in reality. But hopes are dependent on circumstances beyond our control. We must wait for what we hope for, and we cannot be sure it will occur. Hence, there is a sort of cloud on the horizon when we hope. When a hope is fulfilled, we do not go up; rather the cloud lifts and the horizon becomes transformed—things look brighter. Rather than a grin, we see brighter eyes. And rather than wishing to announce his or her new position, the person wishes to welcome the hoped-for event. Gladness functions to enable the person to continue to depend on whatever ally helped fulfill the hope.

Joy differs in yet other ways. Most persons are rarely in direct contact with reality; it is as though there is a veil between us and a perfectly clear perception of the world. But there are times when this veil lifts—when a person experiences the full presence of another person, or a work of art, or a part of nature. This "meeting" is the occasion for joy, and persons report a transformation that involves an increased sense of closeness and harmony with the world and an increased sense of grounding in their bodies. The impulse of joy is to *celebrate* the certainty of meaningfulness that the person experiences, and joy functions to affirm the existence of meaning.

How can we be sure that such descriptions are valid? We can check them in a number of ways. The method used by Lindsay-Hartz involved asking a sample of

persons to give an example experience for each of the three emotions. Then each of these persons was provided with the four different parts of each of the three structural descriptions, without any identifying cues as to the emotion they were supposed to portray. The subjects were then asked to match the abstract structural descriptions with their concrete descriptions of the different emotions. Most were able to do this, and the statistics suggest that it is highly unlikely that such matching could occur by chance.

The descriptions of emotional experience which may be obtained by structural analysis provides discriminations that are important both in theory construction and in clinical work (see, for example, Goodman's [1975] differentiation between the experience of anxiety and the experiences of panic, fear, and terror).

However, structural analysis would merely be an interesting approach to the description of individual emotions were it not for two significant aspects of the structures: (1) their form suggests a synthesis of the major theoretical traditions with which we began our discussion; (2) the structures of the individual emotions appear to be related to one another to form an emotional system that regulates object relations and may be related to biological necessity and personal value.

### **Emotional Structure as an Integration of Prior Traditions**

Let us see how the structural form suggests a theoretical synthesis. We have noted the four parts of an emotion's structure: the way in which the emotion transforms the person's situation, the way in which it transforms the body and the relationship to the environment, the specific instruction as to how to transform the situation, and the way the emotion functions to maintain the person's values. I believe that each of the theoretical traditions may be related to a different one of these parts.

The way in which the emotion transforms the person's situation, by its interpretation of events, may be related to the second tradition which stresses that emotions involve a form of knowing, a way of assessing whether objects or situations are good or bad, or going well or poorly for us. This view of emotion corresponds to the part of the emotion's structure which we have termed the emotion's "situation." Since we usually think of an emotion as occurring as a response to a situation, it may seem strange to think of the situation as part of an emotion, but certainly each emotion does structure or interpret the situation in a particular way. If a stranger shakes a fist at a person, the person may interpret the gesture as a challenge (anger), a dangerous threat (fear), a bit of incongruity (amusement), and so on. The emotion is an assessment of the situation, and these assessments are not simple mechanical reactions but true *transactions* between the person and the environment, giving the situation its meaning. Thus, part of the structure of an emotion reflects an unconscious "choice" about how to perceive one's situation. If emotions were only fixed behavior patterns, they would be as inflexible as reflexes; but since they operate by

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assessing a situation, by participating in the creation of its meaning, they provide a more flexible means of adapting to the environment.

The particular way in which an emotion transforms the body and its relationship with the environment may be related to the third tradition, which stresses the participation of the body in emotion and its influence on what emotion is experienced.

I believe these embodied patterns are much more specific than has yet been demonstrated. As I have said, it seems that the body expresses itself, and is perceived, quite differently in emotions as closely related as elation, gladness, and joy. Rather than working with isolated facial or postural expressions, it may be more fruitful to develop and utilize phenomenological descriptions of bodily responses such as Straus's (1966) description of sighing, Funk's (1974) description of laughing, and Laban's (1960) elaborate descriptive system of patterns of movement.

While the body is crucial to emotion, it does not seem likely that emotional experience is only based on sensory feedback or that it is only a cognition based on bodily and situational cues. Rather, it seems to be a reflection of all the transformations that constitute the emotions. How then may we explain the fact that bodily manipulations may affect emotional experience? I believe that when experimenters manipulate the body, they are not simply providing cues which are then interpreted as an emotion. Rather, they have created the bodily (or situational) component of a particular emotion's structure, and this part has evolved the whole structure and, hence, the emotion. That is, as Koffka (1935) asserted, it seems probable that the evocation of a part of a whole will evoke the entire gestalt. In this view, the manipulation of bodily responses and situational cognitions may evoke an emotion rather than simply affect the interpretation of cues.

The specific instruction as to how to transform the situation, and the way in which an emotion functions to maintain a person's values, may relate to the first and fourth traditions. There is an obvious conflict between the first theoretical tradition we considered, with its view of emotions as motives for action or functional patterns of behavior, and the fourth tradition, which sees emotion as an alternative to action. In fact, it should be noted that the relationship between emotion and action is far from obvious. When we examine the stream of behavior in everyday life (see Barker, 1963) it is often easy to observe an emotional tone to the activity, or to observe emotional incidents, but the functional relationship between expressive and instrumental action is quite unclear.

Consider, for example, the relationship between anger and aggressive behavior. Observation clearly shows that an angry person may have an impulse to attack, and it has been shown experimentally that an angered person is more likely than an unangered person to use an opportunity to hurt another person (Hartmann, 1969) and that the sight of another's pain is more likely to be a positive reinforcer to an angry person (Feshback, Stiles, & Bitter, 1967). However, observation also shows that anger does not necessarily lead to aggressive behavior. In fact, even when an

attack would be completely safe, when a person's anger leads to direct assertive action there may be a complete absence of aggressive impulses. Likewise, it is clear that attacking behavior can be learned in the absence of anger (see Bandura, 1973). In fact, Hartmann's (1969) experiment shows that simply watching a violent film is more effective in producing attack behavior than is the arousal of anger. This is not to say that no emotions occur in attack behavior. The sheer enjoyment of being active and of mastering an attack may be involved when a child models an attack. And, as Bandura shows, the behavior is much more apt to be modeled when it is successful. Also, when a child is feeling bad (e.g., has lost a competition), he or she is more apt to adopt a model's aggressive behavior. But our point is that the emotion of *anger* is not necessarily connected with the attacking behavior which we associate with it.

Now in my view, the first tradition is correct in viewing emotions as functional, as specific, and as involving "impulses" or "energy." Thus, each emotion invokes specific "instructions" which function to impel the person to transform the situation in particular ways. However, these instructions are not mechanistic. In the first place, they are relative to the perceived situation (as interpreted by the emotional structure). If the situation acquires a different meaning, the emotion and its instructions will immediately change. In the second place, while the instructions are specific (such as anger's "remove the challenge" or joy's "celebrate"), they do not specify the particular behavior pattern to be used. That is, the angry person does not necessarily have an impulse to hit or scratch, or swear, or even attack. The instruction is simply the imperative "remove the challenge." In fact—and here is where I believe the fourth tradition is correct—the emotion only occurs when "direct" instrumental behavior is insufficient and, ideally, the emotion suffices to transform the situation independently of direct instrumental behavior. Thus, in the case of anger, the mere assertion of what ought to be, often psychologically removes a challenge (just as, to take an animal example, the mere growl of a dog may remove a challenge without any attack). When immediate instrumental behavior is involved, as when a child learns to hit or kick, the behavior is congruent with the instruction of removing the challenge: it may be influenced by the particular dynamics of the structure, but it is not a mechanically determined part of the emotion.

The fourth tradition asserts that emotion occurs in situations where instinctive, habitual, or planned action cannot occur; hence, emotion is seen as an alternative to action. In like manner, the structural theory asserts that emotions are transformations of the person's way of relating to the emotional object rather than direct sources of instrumental action. The instruction of the emotion is, ideally, accomplished by the transformational power of expressive behavior. As Sartre (1948) remarks, the instrumental behavior which may occur is the result of a failure of the emotion's power to restructure the situation. However, while Sartre, like many of the theorists within this tradition, tends to view emotion as a rather functionless and



magical substitute for action, our structural theory asserts that emotional transformations are basically functional, particularly within the interpersonal field where emotional expression can often effect changes that instrumental action cannot accomplish (as in convincing another person of one's sincerity).

Such interpersonal consequences of the emotion are related to the fourth aspect of our structural analysis—the way the emotion functions to transform how the person relates to others. Again, we postulate that each particular emotion functions to preserve or advance the person's values in a particular way. For example, while anger removes a challenge, it often functions not only to preserve the person's values but to preserve a kind of closeness with the person at whom one is angry. This is true because anger presumes that the other is responsible and that there is a common set of values (otherwise the person could not challenge what ought to exist). Hence, an alternative to anger is always to create distance between the self and the other by seeing the other as not really responsible (insane, a child, a psychopath) or by realizing that one does not have shared values.

It may be objected that emotions are often mistakes, that they may disorganize us and get us into trouble. But the same may be said of ideas. My point is not that emotions are always functional but that emotions are basically designed to be functional, though they may be misused. Imagine a new drug or operation that could eliminate specific emotions; in a given clinical case, one might want to eliminate guilt, anxiety, euphoria, anger, but would one want to eliminate any emotion from the human repertoire? Perhaps even hate and envy have their place and function in a human life.

If the four aspects of an emotion were only a list of unrelated items, we could hardly claim a synthesis of the various theories, but, in fact, the aspects are interrelated parts of a whole and form a true structure. One cannot really separate the emotion's instruction (e.g., remove the challenge) from the emotion's situation (the perception of a challenge, which is something to be removed). Nor can one implement this instruction without the body being transformed (a stiffening of the person's will). Nor could all of this organization exist were it not motivated by the way the emotion functions interpersonally (that is, the perception of a challenge, which can be removed, functioning to maintain a shared unity of values and, hence, avoiding the creation of distance). To summarize: every emotion may be conceptualized as a dynamic structure which transforms the person's situation by affecting how the objective situation is perceived, how this perceived situation is altered, how the body behaves, and how the person relates to his or her values and to significant others.

The many different ways in which emotion can be expressed and communicated may be related to the various components of emotional structure. While most research has focused on studies of facial expression (an aspect of how the body is transformed), Benson (1967) has shown how emotion is often conveyed in literature by a description of the object of the emotion or how the world is perceived when

one has the emotion (an aspect of the situational transformation). And the Gestalt psychologists have emphasized how the expression and perception of emotion often involve the quality of expressive movement—slow and draggy, jerky, soft and flowing—(an aspect of the instructional transformation). These various aspects of emotional transformation probably have isomorphic resemblances and are ordinarily perceived physiognomically. Clearly, the dynamics of the various emotional structures play an important role in artistic communication. Arnheim (1974) has analyzed the dynamics of expressive structures in art and architecture, Langer (1953) has shown how the artist uses these imagined forms to create the semblance of time and emotion in music, the semblance of power and force in dance, and so on, and Dewey (1934) convincingly argues that the unity of a work of art is dependent upon the integrity of the emotional form that holds the work together.

### Emotions as the Transformation of Personal Relations

We have seen that it is possible to describe structures which discriminate between different emotions and that the general form of these structures provides a way to synthesize the various approaches to the nature of emotion, but emotions themselves are but an aspect of those more inclusive affective organizations which McDougall (1908/1923) termed "sentiments" or which psychoanalysts term "object relations," or which we may call "love relationships."<sup>3</sup> As Macmurray has pointed out, each person is born into a love relationship. Because of this, the fundamental unit of psychology must be greater than the individual and even than the life-space of the person-in-environment. "The fundamental unit of the personal is two persons in community with one another and in relationship with a common Other" (Macmurray, 1957).

What do the various emotions, each with their particular structure, have to do with love relationships? We have already noted that one part of an emotion's structure has to do with the functioning of the emotion as it relates to the person's values and relationships with others. When we examine a number of different structures, we begin to become aware that the various structures are related to each other, that they are parts of a more inclusive affective organization, and that each of them appears to have to do with the enhancement and preservation of what is "good" and the avoidance of what is "bad" within the context of the love relationship. In fact, personal values might be said to stand behind emotional transformations in much the same way that motives stand behind actions.

<sup>3</sup> While we cannot discuss the literature on object-relations here, the interested reader may want to consider the affective relationship between mother and child as portrayed by Mahler, Pine, and Bergman (1975), the changing viewpoint within psychoanalysis (Green, 1977; Blanch & Blanch, 1973), and the interesting speculations of D. H. Lawrence (1960).

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One whole class of emotional structures may be called "it"-emotions because they appear to have an object—anger, love, admiration, horror, for example. These deal with the value of the other's actions as perceived by the self. In anger, for example, the other never simply frustrates the person. At the moment of anger, the other is experienced as "bad" or "wrong" in the sense that the person *ought* not to be acting in the way he or she does (as we have noted, an alternative to anger is always to "distance" the other, to make the other not responsible for his or her action). Another class of structures, the "me"-emotions—depression, shame, pride, joy, for example—deal with the self as valued in the eyes of the other. Now the very idea of the self as seen by the other is at the core of symbolic interactionism (see Mead, 1934) and is fundamental for the development of language and culture. Yet here we see it embodied in emotional structures. What is fascinating is that each of these me-emotions appears to be paired with a corresponding it-emotion with a mirror-image structure. For example, if the person experiences *himself* rather than the other as bad, we have a depression rather than an anger structure. Just as anger occurs when a challenge is posed by another, depression occurs when a person acts against his or her own value and thus becomes a self-challenger (see Kane, 1976). Clinicians have always recognized a close link between anger and depression. Now we have a theoretical understanding of the relationship. And the relationship is not only between anger and depression: all emotions are paired. If we are correct, love and serenity, admiration and pride, horror and guilt are all structurally similar, differing only insofar as the other or the self is the object of the valuing process. In fact, the whole affective structure appears to be concerned with *dyadic* relationships such as merger and separation, recognition and dismissal as a group member, and the acceptance and rejection of meaning.

The fact that the other is as intrinsic a part of the emotional system as is the self—that the system is fundamentally dyadic—leads me back to the idea of biological necessity. While the more precise ethologists are much more sensitive to species differences than the average psychologist and are careful not to generalize their findings, the very use of terms such as *attachment* and *territory* suggests a kind of generality, and we find that these same terms are useful in describing different emotional transformations. Thus, in spite of the fact that our own species has its unique behavioral propensities, and in spite of the fact that our specific behavior is largely shaped by cultural factors, I believe that there are fundamental structural similarities across cultures and between our species and many other species. These similarities are none other than the emotional transformations which I have been describing, and these must reflect the biological necessities involved in attaching ourselves to others, dealing with the challenges posed by others to our position, defending ourselves against the dangers posed by others, caring for others who are valued.

Yet in our four-aspect analysis, only one aspect of an emotion is impulsive (the "instruction") and only one aspect of an emotion pertains to its embodiment. Since

the emotion structures its own situation, there is an enormous freedom and flexibility possible in how we respond to situations, in the meaning we give them. And since emotions are in the service of what is valued, cultures are as free to use our inherent emotional structures to promote cooperation, creativity, and synergy (see Maslow, 1972) as to establish competition and destruction.

This is not the place to develop these thoughts to the extent that is obviously required, and I have been proceeding at so abstract a level that I want to conclude with a concrete example. In 1869, Wallace wrote the following description of the behavior of a young orangutan:

For the first few days it clung desperately with all four hands to whatever it could lay hold of . . . hair more tenaciously than anything else. . . . When restless, it would struggle about with its hands up in the air trying to find something to take hold of, and when it had got a bit of stick or rag in two or three of its hands, seemed quite happy. For want of something else, it would often seize its own feet, and after a time it would constantly cross its arms and grasp with each hand the long hair that grew just below the opposite shoulder. . . . Finding it so fond of hair, I endeavored to make an artificial mother, by wrapping up a piece of buffalo skin into a bundle, and suspending it about a foot from the floor. At first this seemed to suit admirably, as it could spread its legs about and always find some hair, which it grasped with the greatest tenacity. I was now in hopes that I had made the little orphan quite happy; and so it seemed for some time, till it began to . . . try to suck. It would pull itself up close to the skin, and try about everywhere for a likely place; but, as it only succeeded in getting mouthfuls of hair and wool, it would be greatly disgusted, and scream violently, and after two or three attempts, let go altogether (cited in de Vore, 1965, p. 520).

Note that quite apart from the specific behavioral mechanisms that are mentioned—the grasping for hair, the motivated search for a stimulus to release sucking behavior—Wallace mentions a number of emotional transformations: the clinging has a "desperate" quality, the orangutan is "restless," when it achieves contact it is "happy" and later it is "disgusted" (in the angry sense of the word). And by now the reader will realize that I do not think that Wallace is being anthropomorphic but, rather, is referring to different emotional structures that are just as present as the grasping. What I am suggesting is that such emotional transformations are related to a valuing process that is bound up with our relations to others (in this case, to the infant orangutan's relationship to the mother), and that it is this valuing process that is just as crucial a part of our biological inheritance as are any specific releaser stimuli. Without such a valuing process, the organism would only exhibit inflexible instinctual mechanisms. For example, the young orangutan would mechanistically continue its search for a nipple rather than emotionally realizing that it was dealing with a bad mother.

We do not restrict our account to the orangutan's behavior. Notice Wallace's

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behavior—his obvious concern for the infant—hoping that he had made it happy. Is there any doubt that a success would result in the transformation of gladness? And note our own reaction to Wallace, in his hut in Malaysia, attempting to manufacture an artificial mother for the “little orphan,” “finding it so fond of hair,” as he did. If the reader values nurturance, as I personally do, we may feel a bit of fondness for Wallace, thus experiencing a small emotional transformation of our own—supporting our values as we symbolically join another member of our species who manifests caring.

### Appendix

#### *Concerning the “Energetics” of Emotions and Their Expression*

While it is not possible to maintain a simple energy model of the emotions, there are many phenomena which require us to recognize the “energetics” of emotional organization and the relative autonomy of these dynamics.

1. When an emotional structure occurs, it shapes a person's experience, assimilating objects and events into its organization of reality. As Dewey (1934) observes,

In the development of an expressive act, the emotion operates like a magnet drawing to itself appropriate materials: appropriate because it has an experienced emotional affinity for the state of mind already moving. Selection and organization of material are at once a function and a test of the quality of the emotion experienced (p. 69).

2. There are instances where an emotional structure seems to impose its situation on the objective situation in a way which distorts its reality. For example, a person in a situation which is experienced as frustrating may, at first, “contain” or suppress any anger. Later, however (often in a situation where it is safer to express anger), the person becomes angry at a relatively trivial instance (see Dollard et al., 1939). Or a person experiencing loneliness finds himself pretending that an obviously unsuitable other is a potential lover. Or a soldier who experiences “shell shock” keeps living in a world that is completely dominated by the terror of being trapped in a burning tank or the horror of being splattered by his friend's body. The emotion's influence persists until it (or some other intense emotion) is relieved (see Sargent, 1975).

3. In other cases, the absence of an emotional structure that seems to be called for by the objective situation prevents a transformation of the situation, which then persists in a distorted form. For example, persons who suffer the loss of a loved one

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but are not able to grieve, often continue to behave as though the dead person is still really present (see Volkan et al., 1977). Or a person who never experiences anger feels no anger upon being abandoned by his or her spouse but develops an ulcer. (Note that in this view the ulcer is not an unconscious expression of anger so much as a failure of anger to occur.)

From our perspective, all of these “energetic properties” may be related to the structural dynamics of each particular emotion and how its structure relates the person to the situation he or she is in. We do not need to speak of quantities of aggressive drive or postulate four hundred different types of emotional energy. There is only one type of “emotional energy,” but it is transformed by the different forms the emotional structures can take. Thus, the “energy” of depression may be transformed into the energy of hate—and even into the energy of love—according to the structure the person uses.

Rorty (1978) has written an interesting essay on the different ways in which we may explain the persistence of tenacious or inappropriate emotions. One of these ways has to do with the effects of past experience on our perception of the current situation. There are two ways to conceptualize this effect. Leeper (1970), one of the theorists who has recognized a close tie between emotion and perception, has demonstrated that earlier perceptual experience establishes a “set,” so that a person will not be aware of the ambiguity of the present stimulus situation (the different ways in which it may be interpreted) but will simply see it as it was perceived in the past. Differences in past experience account for one reason why the same objective situation will evoke different emotional structures in different persons, and why a given person will tend to persist in his or her emotional structuring of the situation. A somewhat different dynamic has been articulated by Muchielli (1970), who shows how past emotional structures may persist as unfinished tasks which affect the person's present construal of emotional situations. In a sense, this is a rather straightforward interpretation and extension of the phenomena which Freud elaborated—for example, the persistence of an unresolved Oedipal situation.

There are many other aspects of personality that affect how emotion is experienced. As persons develop, they specialize in different ways of controlling strong emotional reactions (see Lazarus, 1968) and cultivate different “tastes” for emotions, some specializing in wonder and a quest for stimulation, others developing an appetite for anger or the thrills of fear (see Dahl, 1979). And as Schacter (1964) suggests, different personalities treat their emotions quite differently; some making a display of their emotions, others conceiving them as dangerous but precious, to be hoarded or given as presents.

Just as individuals tend to specialize in certain emotions and ignore others, cultures appear to build their institutions on the elaboration and repression of different emotional structures. Briggs (1970), who provides an account of the emotion terms used by the Utku Eskimos, describes how the Utku feel that anger is

only appropriate in small children and white foreigners. Adults cultivate an accepting attitude, and do not make assertions about the way things ought to be, and do not feel challenged and angry. (Still, one notes some evidence of the deleterious consequences of having an emotion be unacceptable. For example, Briggs describes Uku men going out of the igloo to beat their dogs—without experiencing any anger or being able to offer an explanation for this action.) On the other hand, a culture may provide opportunities for ritualized expression of emotions. Among the Gahuku in New Guinea, the violent expression of anger is sanctioned in one ceremony which allows the oppressed women to vent hostility against the dominating males (Read, 1965).

Within our own culture, the Japanese psychiatrist Doi (1973) has pointed out the relative absence of an emotion which is quite prevalent in Japan. The Japanese term *amae* refers to an emotional structure for which we have no term in English, but which we might call "passive dependency love." The emotion reflects the need to be taken care of, and the person expressing the emotion assumes that the other will take care of him or her. Of course, we may observe this emotion in children, and it plays a prominent role in Balint's (1965) theory of object-relations. However, while the Japanese build upon the emotion and make it the cornerstone of the reciprocal dependency relations which hold their families and industries together, we ordinarily look down upon the expression of *amae*, discouraging it as antithetical to our own valuing of independence and our ideology of self-sufficiency.

On a more abstract level, a number of psychologists have worked with the emotional dynamics that hold a group or a culture together. While Freud's (1913/1950) theory and Slater's (1966) observations stress the theme of a common identification with a primal leader, Redl (1942) has specified a number of other emotional relationships which may bind a group together. In a related vein, Denison (1928) has used historical examples to show how different patterns of love relationships may be used to hold a cultural group together, and Ricoeur (1972) has described different ways in which peoples have structured their sense of evil.

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## II. THE SPECIAL FIELDS OF PSYCHOLOGY

### Motivation, Emotion, and Value

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