

CHAPTER 4

Cognitive Content of the Emotional Disorders

*The neurotic is not only emotionally sick—he is
cognitively wrong.*—Abraham Maslow

The capacity of human beings to integrate myriad environmental events and to react adaptively is a tribute to our psychological development. Even more striking is our ability to discriminate among the subtle cues in interpersonal situations and our resiliency in the face of disappointment and frustration. The ability to use imagination creatively and yet to check it from impinging on our sense of reality is further evidence of our maturation.

Despite this glowing picture, it is obvious that we do not respond consistently well to all challenges. We have specific vulnerabilities, "fault lines" along which stresses accumulate and may set off tremors or eruptions—behavior commonly labeled "over-reacting." Under such conditions unrealistic appraisals override realistic appraisals, and we may realize that our reactions are largely irrational.

We are all familiar with examples of over-reacting:

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A man suddenly becomes belligerent when his friends question his role as an authority in a particular area; a generally self-composed woman becomes very upset when she finds "she doesn't have a thing to wear" to a formal dinner; a student who receives a lower grade than expected on an examination becomes morose and considers himself a total failure. Such instances of excessive or inappropriate emotional reactions point to the importance of the internal dramas that permeate our experiences: We envision clashes of the forces of good and evil, triumphs and tragedies, heroics and infamies. We have glimpses of these internal theatricals in our dreams and daydreams. When the dramatic force of these productions sweeps over our rational appraisals, we experience excessive or inappropriate emotional reactions.

Some people become so engulfed by these internally generated fantasies that their behavior and emotions are controlled by the fantasies. When the inappropriate or excessive reactions burgeon beyond a certain point or level of distress or disability, then we are likely to label them "emotional disorder," "neurosis," "psychological disturbance," or "psychiatric disease." These disorders frequently assume a characteristic form that allows them to be fitted into a generally recognized category such as depression, anxiety state, or paranoid state. Although related to the kinds of emotional reactions already described (Chapter 3), these psychological disorders differ from normal emotional reactions because of the intrusion of unrealistic thinking regarding key issues in the patient's life. The disturbance in thinking can be best illustrated by one of the most dramatic syndromes seen by therapists—acute neurosis.

THE ACUTE EMOTIONAL DISTURBANCE

The misery of psychiatric disorders is epitomized by the acute neurotic reaction. In its most flagrant form, this reaction is manifested by a variety of intense, unpleasant experiences. Familiar objects seem strange, distorted, or unreal. Moreover, the patient's internal experiences seem peculiar. He may experience loss of normal sensation in his limbs or in the interior of his body. His body may feel heavy or weightless. Events take on new meanings and significances. A past occurrence previously regarded as trivial looms large. Such reactions are generally beyond the realm of the patient's ordinary experience. Some patients compare the strangeness of the experience to reactions while undergoing anesthesia, having a "bad trip" under the influence of drugs, or having a nightmare.

A devastating aspect of the acute emotional disturbance is the slippage of controls previously taken for granted. The patient has to grapple to retain voluntary control over concentration, attention, and focusing. He has trouble framing his thoughts or following along a consistent line of thinking. His awareness of himself and of his surroundings is not only altered, but diminished, so that he has difficulty in perceiving many details in his environment. Paradoxically, however, he may be exquisitely sensitive to such stimuli as the tone of a person's voice or certain internal sensations. He may be confused to the point of disorientation. Even though he may correctly identify who he is and where he is, he is not positive of this identification.

The extreme form of this disturbance has been labeled a "catastrophic reaction." The person expresses his

uncanny experiences by descriptions such as, "I don't feel that I'm really here," "I feel different," "Things look different." In trying to capture the quality of the experience, he applies terms such as, "I feel I am losing my grip;" "I am going out of my mind;" "I am dying;" "I feel I am ready to pass out;" "I am coming apart;" "I am going crazy." Although these eerie feelings are often interpreted by the afflicted as a sign that he is "going insane," they are generally associated with acute neurotic reactions rather than with psychosis.

In addition to experiencing the strange feelings and disruption of ordinary psychological processes described above, the patient may be engulfed by intense anxiety, sadness, or rage. Even when the emotion is a magnification of a pleasant feeling, such as the euphoria of manic reactions, its intensity makes it unpleasant.

Is it possible to make sense out of the strange psychological phenomena in an acute neurosis? A striking component of the peculiar experiences is intense self-consciousness. The patient becomes overly aware of his internal processes. His attention is fixed on his perceptions, thoughts, and feelings, with the result that these psychological processes become extremely vivid. In addition, he is overly attentive to certain cues in his environment and oblivious to others—"tunnel vision." With the binding of his attention to specific internal and external stimuli, the patient has great difficulty in mobilizing sufficient attention to focus on other areas of experience.

The phenomenon of self-consciousness and attention-binding in acute neurosis is similar to reactions experienced by many people in realistically threatening situations. A student taking an important oral or written examination may experience anxiety because of the

threat to his life objectives. He finds it difficult to focus on his immediate task—reading or listening to the questions and drawing on his memory to supply the answers. His attention is drawn, instead, to ideas about failing, continual evaluations of his performance, and scanning of his unpleasant emotional state. Because of the fixation of his attention on these distracting ideas, he has difficulty in making sense out of the questions, and he experiences “blocking” in his attempts to recall material and to form the appropriate sentences. His blocking and impaired efficiency are produced not by the anxiety per se, but by the binding of his attention to irrelevant thoughts and feelings.¹

A similar set of psychological reactions may ensue upon exposure to physical danger. A soldier exposed to combat for the first time may experience difficulties in concentration and in shifting his focus. His attention may be so fixed on the notion of danger and the wish to escape that he is unable to understand and follow commands that will protect his life. Similar experiences are reported by people in other precarious situations. A novice, hiking along a steep mountain slope, may be so preoccupied with the notion of falling that he walks clumsily or stumbles, thus placing himself in jeopardy.

Compare the reactions to realistic threats with those experienced by a patient with an acute anxiety neurosis. The patient, similarly, is overly alert to stimuli relevant to danger; any change in his environment, such as an unexpected sound, draws his attention: He is overly vigilant to any signal that might be indicative of danger. At the same time, he has difficulty in focusing his attention on

¹For experimental validation, see Sarason (1972b) and Horowitz et al. (1971).

those components of his environment that do not denote danger.

Despite the similarities, the patient with acute anxiety reaction differs significantly from the person exposed to a realistic threat. The danger the patient perceives is nonexistent or blown out of proportion. He is not only preoccupied with the idea of danger, but he consistently misinterprets innocuous stimuli as indicative of danger.

The problem of the anxiety-neurotic is not primarily in labeling stimuli—he can readily label a loud sound—but in the meanings and significances he attaches to certain stimuli. His interpretations tend to be far-fetched, improbable, unrealistic. The sound of a siren indicates his house is on fire; a pain in the back of his head suggests he is having a stroke; an approaching stranger is regarded as an assailant. The cumulative effect of indiscriminately interpreting events as danger signals is a warped view of the real world and escalating anxiety. The misconstruing of situations constitutes cognitive distortion ranging from mild inaccuracy to gross misinterpretation.

Binding of attention, constriction of awareness, selective abstraction, and distortion occur not only in acute anxiety neuroses but in other acute neuroses such as depression, hypomania, and paranoid state. These states differ in the kind of emotion experienced: sadness, euphoria, anger. The differences in the emotion may be accounted for by the differences in the deviant meanings or the themes of the thinking. As we shall see, in each neurosis reality is twisted to fit concepts that dominate the patient's thinking. Thinking disorders are also at the core of other neuroses such as hysteria, phobia, and obsessive-compulsive neurosis.

NEUROTIC DISORDERS

Although the acute emotional disturbance is not observed frequently by clinicians, its florid characteristics illuminate the more subtle difficulties encountered in the more common forms of neurotic reaction. In the less dramatic forms of neurosis, the thinking disturbance may occur only in certain situations or in relation to specific problems that impinge on the patient's vulnerabilities. In other situations, his thinking is reasonably attuned to reality. Nonetheless, even the more chronic or milder forms of the neuroses are occasionally punctuated by episodes similar to the acute emotional disturbance.

Since canalized thinking, attention-fixation, and distortions of reality may occur in all the neuroses, the key differences among the neuroses are revealed in the *content* of the aberrant thinking rather than in its form. Later we shall review other thinking peculiarities typical of the neuroses in general, but for the present we shall examine the differences in the content.

In those neuroses characterized by excessive emotional reactions, the emotional state characteristic of each disorder is evoked by the specific content of the aberrant thinking. Sadness—the typical emotion of depression—stems from the patient's tendency to interpret his experiences in terms of being deprived, deficient, or defeated. The euphoria observed in hypomanic states results from the perseverative preoccupation with ideas of self-enhancement. The anxious patient experiences his feelings of distress by overinterpreting his experiences in terms of danger, while the paranoid patient feels intense anger because of his fixation on notions of being abused.

The basic data for ascertaining the thinking disorder

in neurotic patients were derived from verbatim notes of their verbal reports during psychotherapy or formal psychoanalysis (Beck 1963; 1967). These reports dealt with their major repetitive ideas, their descriptions of their interpretations of situations, and their automatic thoughts. The possibility that I may have influenced the nature of the patients' reports is minimized by the fact that my own preconceptions were contrary to the content that emerged. For instance, the repeated observation that depressed feelings and anxiety were based on cognitive distortions relevant to the theme of loss or danger, respectively, forced me to revise my thinking about these conditions. The new formulations gradually eased out the psychoanalytic theories that I had been taught and believed: that depression is caused by hostility turned against the self and anxiety is stimulated by the threatened break into consciousness of a taboo wish.

I initially reported my findings and conclusions based on 81 patients treated by me (Beck, 1963). The findings held for a later sample of 100 patients in treatment with me (Beck, 1970c). I also found that, by asking relevant questions during diagnostic interviews of patients in the clinic, the psychiatric residents obtained further confirmatory material. Concomitantly, I found support for the formulations in a number of controlled investigations by my research group (Beck, 1961; Loeb, Beck, and Digory, 1971) and in independent observations and studies by other clinicians and researchers (Ellis, 1962; Velten, 1967).

On the basis of the clinical observations and systematic studies, I was able to distinguish among the common neurotic disorders according to differences in the content of ideation. These differences are illustrated in the following table.

TABLE 1

IDEATIONAL CONTENT OF NEUROTIC DISORDERS

	<i>Idiosyncratic Ideational Content</i>
Depression	Devaluation of domain
Hypomania	Inflated evaluation of domain
Anxiety Neurosis	Danger to domain
Phobia	Danger connected with specific, avoidable situations
Paranoid State	Unjustified intrusion on domain
Hysteria	Concept of motor or sensory abnormality
Obsession	Warning or doubting
Compulsion	Self-command to perform specific act to ward off danger

DEPRESSION

The thought content of depressed patients centers on a significant loss. The patient perceives that he has lost something he considers essential to his happiness or tranquility; he anticipates negative outcomes from any important undertaking; and he regards himself as deficient in the attributes necessary for achieving important goals. This theme may be formulated in terms of the cognitive triad: a negative conception of the self, a negative interpretation of life experiences, and a nihilistic view of the future.

The sense of irreversible loss and negative expectation leads to the typical emotions associated with depression: sadness, disappointment, and apathy. Furthermore, as the sense of being trapped in an unpleasant situation or of being enmeshed in insoluble problems increases, spontaneous constructive motivation dissipates. The patient, moreover, feels impelled to escape from the apparently intolerable condition via suicide.

HYPOMANIC STATE

The thought content of the hypomanic or manic patient is the reverse of that of the depressive. The manic or hypomanic patient perceives a significant gain in each of his life experiences. He indiscriminately attributes positive values to his experiences, unrealistically expects favorable results from his endeavors, and has exaggerated ideas of his abilities. These positive evaluations lead to feelings of euphoria. Moreover, the continued bombardment of inflated self-evaluations and overly optimistic expectations energizes and propels him into continuous activity.

ANXIETY NEUROSIS

The thinking of the anxious patient is dominated by themes of danger to his domain; that is, he anticipates detrimental occurrences to himself, his family, his property, or to his status and to other intangibles he values. In contrast to the phobic patient who experiences anxiety in avoidable situations, the anxiety-neurotic perceives danger in situations he cannot avoid. A person who is continuously afraid of developing a serious or fatal illness may interpret any unusual physiological symptom as a sign of such illness. Shortness of breath may arouse the idea that he is having a heart attack; diarrhea, constipation, or a vague pain may lead him to believe he has cancer. Frequently, his fears envelop external stimuli. He may interpret any unexpected sound as a signal of disaster. Noises in his house arouse fears of burglars breaking in; automobile backfire suggests gunshots; a youngster's shout stimulates visions of physical violence.

Many anxious patients are afraid predominantly of

psychological harm. The anxious person is often concerned that other people, strangers as well as friends, will reject, humiliate, or depreciate him. Anticipation of physical or psychological harm is chained to anxiety; consequently, when such expectations are formed, anxiety is stimulated.

PHOBIA

In phobias, the anticipation of physical or psychological harm is confined to definable situations. If the patient can avoid these situations, then he does not feel threatened and may be tranquil. If he enters into these situations because of necessity or because of his own desire to overcome his problem, he experiences the typical subjective and physiological symptoms of the anxiety-neurotic.

As in the psychiatric disturbances described previously, the patient's cognitive response to the stimulus situation may be expressed in purely verbal form or in the form of imagery. A woman with a fear of heights, who ventured to the twentieth floor of a building, promptly had a visual image of the floor tilting, of sliding toward the window, and of falling out. She experienced intense anxiety, as though the image were an actual external event.

Fears of particular situations are based on the patient's exaggerated conception of specific harmful attributes of these situations. A person with a tunnel phobia will experience fears that the tunnel will collapse on him, that he will suffocate, or that he will have an acute, life-threatening illness and be unable to get help in time to save him. The acrophobic similarly reacts to high places

with fears that he might fall off, that the structure will collapse, or that he might jump off impulsively.

PARANOID STATE

The paranoid patient perseverates in assuming that other people are deliberately abusing him or interfering with his objectives. Unlike the depressed patient who feels that supposed insults or rejections are justified, the paranoid patient is preoccupied with the idea that an injustice has been done. The main theme in his thinking is "I am right, he is wrong," in contrast to the depressed patient who follows the theme, "I am wrong, he is right." Unlike depressed patients, the paranoid patient does not experience any lowering of his self-esteem. He is more concerned with the injustice of the attack on his domain than with the actual loss to his domain.

Differences among anxiety neurosis, neurotic depression, and paranoid state may be summarized as follows: The anxious patient focuses on the possibility of an attack; the paranoid patient concentrates on the injustice or malevolent motives behind a supposed attack or infringement on his boundaries; the depressed patient focuses on the presumed loss he attributes to some inadequacy of his own.

OBSSESSIONS AND COMPULSIONS

The content of obsessions is generally concerned with some remote risk or danger expressed in the form of a doubt or warning. The person may continually doubt whether he has performed an act necessary to ensure his safety (for example, turning off a gas oven), or he may

doubt whether he will be able to perform adequately. The thoughts differ from those of the anxiety-neurotic in that they are concerned with an action the patient believes he should have taken or an action he should not have taken. As an example of the latter, a patient repeatedly had the thought that he might have contracted leukemia because he touched the garment of a leukemic victim.

Compulsions consist of attempts to allay excessive doubts or obsessions through action. A hand-washing compulsion, for instance, is based on the patient's notion that he has not removed all the dirt or contaminants from parts of his body. He regards the dirt as a source of danger, either as a cause of physical disease or as a source of offensive odors. We often see the triad of phobia-obsession-compulsion: A patient, for example, was afraid of being harmed by radiation. His phobia was manifested by avoiding contact with objects that might emit radiation (e.g., clocks, because of radioactive dials; or television sets). After an unavoidable contact with such an object, he ruminated about the possibility of contamination (obsession). This led him to taking frequent, prolonged baths to remove the presumed radioactive material (compulsion).

HYSTERICAL REACTIONS

In hysteria the patient believes he has a physical disorder. Since the imagined disorder is not fatal, he tends to accept it without severe anxiety. Patients with hysteria are essentially "sensory imagers"; that is, they imagine the particular illness and then take the sensory

experience as corroborative evidence of having the illness. The patient typically experiences sensory or motor abnormalities that fit the pattern of his erroneous concept of organic pathology.

PSYCHOSES

Although the complicated subject of psychoses is beyond the scope of our inquiry, it might be useful to compare the thought content of psychoses with that of neuroses. The ideational themes of psychotic depression are analogous to those of neurotic depression. Paranoia or paranoid schizophrenia shows a similar content to that of paranoid states. The manic reaction resembles the broad content of the hypomanic. The content of the ideation of the psychoses, however, is more bizarre, grotesque, and extreme than that of the neuroses. Whereas a neurotic depressive may view himself as being socially inadequate, the psychotic depressive may believe he emits disgusting odors that alienate other people.

Psychoses as a class show more pronounced cognitive impairment than do neuroses. The perseverative ideation is more intense and less subject to modification through corrective experience. The patient's capacity to view his erroneous ideas objectively is much more limited; furthermore, the degree of illogical and unrealistic thinking is more pronounced.

NATURE OF THINKING DISORDERS

A thinking disorder, in the absence of organic pathology, has generally been considered a feature of

schizophrenia. In contrast, depression, mania, and anxiety—with their florid emotional manifestations—have been regarded, in essence, as “affective” or emotional disorders. However, there is now considerable evidence that a disorder in thinking, less gross and more circumscribed than that described in schizophrenia, is an important component of the common psychiatric syndromes.

In a long-term study (Beck, 1963) I found that each of the patients systematically misconstrued specific kinds of experiences. These distortions of reality ranged from subtle inaccuracies in the mild neurotics to the familiar grotesque misinterpretations and delusions in the psychotics. The peculiar ideation of the patients showed systematic departures from reality and logic, including arbitrary inferences, selective abstractions, and overgeneralizations. These distortions occurred in ideation that was relevant to the patient's specific problem. For example, the depressed patient showed aberrations when he was thinking about his worth; the anxious patient, when he was concerned with the notion of danger.

The distorted ideas had the characteristics of “automatic thoughts” (see Chapter 2). They appeared to arise as if by reflex, without any apparent antecedent reflection or reasoning. They seemed plausible to the patient even though implausible to other people. Finally, they were less amenable to change by reason or contradictory evidence than were other forms of ideation not associated with the specific form of psychopathology. I observed a gradation of impaired thinking from the mild neurotic to severe psychotic. As the illness became intensified, the patient showed a progressively greater degree of distortion, increasing repetition of distorted ideas, and progressive fixation of the distortions.

PERSONALIZATION

The inevitable egocentricity of man has intrigued writers and philosophers for ages. In a sense, everybody seems to have a private world of which he is the axis. Heidegger (1927) and others have described how each individual constructs his own personal world. Nonetheless, people are generally capable of making objective judgments about external events—or even about themselves—and are able to disentangle the personal meaning of an event from its objective characteristics. They are able to make judgments on two different levels—one relevant to themselves (or their domain), and the other detached from themselves. In psychiatric disorders, we find that the egocentric interpretations become unusually compelling and may totally displace objective judgments. Labels such as “personalization” or “self-reference” are applied to the propensity to interpret events in terms of their personal meanings.

The process of personalization or self-reference can be best illustrated by a few extreme examples: specifically, patients who fall into the loose category of “psychotic.” A paranoid schizophrenic patient believed that the images he saw on the television screen were talking directly to him, and he spoke back to them. A psychotic depressive heard about an epidemic of an infectious disease in a distant land and blamed himself for having caused it. A manic woman believed that everybody she passed on the street was in love with her. Psychotic patients consistently interpret events totally unrelated to them as though they were caused by them or directed against them.

Less extreme forms of self-reference are found in neurotic patients. They tend to overestimate the degree

to which events are related to them and to be excessively absorbed in the personal meanings of particular happenings. A depressed patient, observing a frown on another person's face, thinks, "He is disgusted with me." Although it is conceivable that in this instance the patient's judgment is correct, his error lies in his notion that every grimace he observes in other people represents disgust with him. He overinterprets the frequency as well as the degree of negative feelings he evokes in other people. A depressed mother blames herself for every imperfection in her children. An anxious patient relates every danger signal to himself: A passing ambulance makes him think his child has had an accident.

Another form of personalization is found in man's irrepressible tendency to compare himself with other people. A woman observing a billboard of a happy mother and child thinks, "She's a much more devoted mother than I." A student, hearing that another student has won a prize, thinks, "I must be dumb or I would have won the prize." A young phobic patient, reading of an elderly person having a heart attack, thinks, "If he had a heart attack, it could happen to *me*" and starts to feel pain in his chest.

The basic egocentric coloring may be found in each of the facets of aberrant thinking of neurotic patients. The process of decentering, that is, training the individual to use a frame of reference that does not pivot on him, is described in Chapter 10.

POLARIZED THINKING

The neurotic patient is prone to think in extremes in situations that impinge on his sensitive areas, for exam-

ple, his self-evaluations (depression), the possibility of personal danger (anxiety neurosis). Thinking in extremes may be confined to only a few areas. Events are labeled as black or white, good or bad, wonderful or horrible. This characteristic has been termed "dichotomous thinking" or "bipolar thinking" (Neuringer, 1961). The basic premises underlying this kind of thinking are generally couched in absolute terms such as "always" or "never."

An example from everyday life is a young man who was fixated on the concept of absolute acceptance and rejection. He would scrutinize practically everybody with whom he came in contact—a clerk in a department store, a passerby in the street—to determine whether the person appeared to accept or reject him. He could not modulate his judgment to include fine gradations such as mild acceptance, mild rejection, or neutrality. Neutrality (and indifference) represented rejection and made him feel sad; a smile represented complete acceptance and elicited euphoria.

A similar example of this kind of thinking was exhibited by a young college student when he played basketball. If he scored less than eight points in a game, he thought, "I'm a failure," and he felt sad. Scoring eight points or more meant, "I'm really a great player," and led to feelings of exhilaration.

Sometimes thinking in extremes is unipolar: for example, events may be perceived either as totally bad or neutral or irrelevant. "Catastrophizing," a common characteristic of anxious patients, illustrates anticipation of extreme adverse outcomes. The thinking of the anxious patient is grooved toward considering the most unfavorable of all possible outcomes of a situation. For example,

a patient who received a scratch on his arm immediately began to dwell on the possibility of its leading to a fatal infection.

One's penchant to make extreme judgments may be confined to tangible objects. A man, for example, became upset when he detected the slightest damage in his material possessions. A slight dent in his car, a scratch on his furniture, a worn spot on his clothes represented major losses. On one occasion, he discovered that an unexpectedly large flame in his fireplace had scorched the protective grille. He was agitated for several hours. His thoughts were: "This is a permanent defacement, it can't be repaired. It ruins the whole room, it was perfect before, now it's wrecked." As the days passed, he viewed the damage more objectively (that is, as trivial). Also the degree to which he exaggerated the damage was reflected in his self-criticisms, "I was a fool to let it happen, I am inept, I never do anything right."

Persons who characteristically react to a noxious stimulus with anger may also show extreme judgments. Consider this reaction of a parent whose child had lost a glove: "That's terrible. You'll drive us to the poorhouse. You never do anything right."

Related to making extreme global judgments are other types of thinking that lead to distortions or misinterpretations (Beck, 1963). *Selective abstraction* refers to abstracting a detail out of context, and thus, missing the significance of the total situation. A person makes an *arbitrary inference* when he jumps to a conclusion when evidence is lacking or is actually contrary to the conclusion. *Overgeneralization* refers to unjustified generalization on the basis of a single incident. For example, a child makes a single mistake and thinks, "I never do anything

right." These examples illustrate how aberrant thinking is aroused in situations that impinge on specific vulnerabilities, such as acceptance-rejection, success-failure, health-sickness, or gain-loss.

"THE LAW OF RULES"

We have seen (in Chapter 2) that a person has a program of rules according to which he deciphers and evaluates his experiences and regulates his behavior and that of others. These rules operate without the person's being aware of his rule-book. He screens selectively, integrates, and sorts the flow of stimuli and forms his own responses without articulating to himself the rules and concepts that dictate his interpretations and reactions. The operation of the input-output apparatus is far from perfect.

Problems inevitably crop up in understanding the behavior of other people. Because of his having been inadequately or inappropriately prepared by his previous experience, a person may infer incorrect *meanings* from their behavior: their underlying attitudes towards him, their present intentions, their probable future conduct toward him.

In a previous example (Chapter 2), a student is corrected by an instructor. The student wonders: Is this a friendly gesture? Or does it mean that he has irritated the instructor? Does it indicate that the instructor believes that the student is stupid? Is the instructor likely to be harsh and punitive in grading him? With this wide range of possible inferences from a particular interaction, it is not surprising that many students are hypersensitive to teachers' comments!

At times a student may read more harshness into a teacher's comment than was intended. If the student's exaggerations or distortions of the interaction are mild and transient, then he can maintain his psychological equilibrium. However, let us consider a bright student who, because of his particular sensitivities, is predisposed to regard criticisms as derogatory. As "criticisms" accumulate, he becomes increasingly more likely to label subsequent remarks or suggestions by the teacher in the same way. Unless his tendency is reversed by some clearly positive action by the teacher, he becomes overly inclusive in his labeling: He begins to regard neutral or mildly positive messages from the teacher as derogatory. He overgeneralizes so that he concludes that not only this teacher, but all his teachers, are critical and believe he is stupid. He proceeds on the basis of this "evidence" to the conclusion that he is totally, irreversibly defective—worthless. Further, picture the student back in his room ruminating about these "denunciations" and "errors" to the point that he is no longer able to concentrate on his work. He then interprets his difficulties in concentrating and subsequent impaired performance in his classwork as evidence of his defectiveness. Now include the inevitable dysphoria—probably sadness mixed with anxiety—and we have the beginnings of a psychiatric disorder. If the condition persists for many days or weeks, it becomes depression.

We can analyze this hypothetical case in terms of the student's rule book. In every classroom interaction, the student repetitively applies rules regarding the teacher's evaluations. He uses the following rules: "A criticism means the teacher thinks I'm stupid. If an authority thinks that I'm stupid, it means I *am* stupid. Since I am

stupid, I shall never get anywhere." He then applies a formula to his impaired performance: "My inefficiency *proves* I'm stupid." He even has a rule for the consequent dysphoria: "If I'm sad it means that things won't work out for me." The student is applying a series of "logical" operations with the conclusion of one constituting a premise for the next conclusion.

Each of the psychiatric disorders previously discussed has its own set of rules. In anxiety neurosis, the rules are concerned with the concept of danger and the patient's estimate of his capacity for coping with it. The conclusions derived from the application of the rules take the form of predictions such as, "I am in imminent danger of losing my most prized attributes (health, life, friend, job)." "I do not have the means to ward off this danger." The specific rules leading to these conclusions are applied (or misapplied) to specific events: "My rapid heartbeat means I'm having a heart attack, and I may die if I don't get help." "If I am away from home, calamities may occur and I won't be able to cope with them." "If I make a mistake, I may antagonize my boss and he will fire me."

In anxiety, the rules are generally conditional: "If a particular event occurs, it will probably have adverse results." Hence, when the event occurs, there is still a possibility of an innocuous outcome. In contrast, the rules in depression are absolute and unconditional: "My present deficiencies mean I shall always be a failure."

In phobias, the rules are also conditional; they apply to situations the patient is successfully able to avoid: "If I go into a tunnel, I might suffocate." "If I go to an unfamiliar place, I might get lost." In these cases, the patient also operates under the rule, "I won't be able to cope with the situation myself." As in the case of anxiety,

these rules attach a high probability of disaster occurring. However, the patient is often fortified by the assumption, "If a helpful person is with me, he can save me." Hence, many phobic patients can enter the frightening situation if a "helper" is available.

In depression, the rules as formulated derive negative meanings and negative predictions from a present or past circumstance. There is no "escape clause" as in anxiety and phobias. Examples of the rules are: "Not being successful in my career equals being a total failure." "Since I am sad now, I shall always be sad." "When something goes wrong, it is my fault." "Losing my wife's love means I am worthless." "Not being admired means I am unlikable."

In manic conditions, the content of the assumptions is opposite to that in depression. The rules are framed in such a way as to exaggerate the gain and elevate self-esteem: "When people look at me, they admire me." "If I have a job to do, I shall do a superb job." "Each success proves again how superior I am."

The rules of the paranoid patient are likely to be unconditional and absolute. The content of the rules reeks of conspiracies, unjustified abuse, discrimination: "When people don't agree with me, they are deliberately trying to oppose me." "When I don't get what I want, it means somebody has sabotaged me." "When things don't go right, it is because of other people's interference."

When we question a patient about his ideas, he generally does not volunteer the rule that shapes his interpretation of events. Instead, he states his *conclusion*. For example, a patient with anxiety neurosis states, "I may be about to die"; with depression, "I have lost everything that matters to me . . . I am worthless"; with

mania, "I am supreme"; with paranoid reaction, "Everyone is against me."

We have to work back from the conclusion to derive the rule (assumption, premise). Sometimes, the patient is able to articulate the rule without difficulty. A depressed, suicidal woman who had previously had a breach in her relationship with her lover said, "I am worthless." When asked why, she stated, as though it were a universal truth, "If I don't have love, I am worthless." More frequently, a sequence of questions is necessary to elicit the rule:

Anxious patient: "I think I am dying."

Therapist: "What makes you think so?"

Patient: "My heart is beating hard. Things seem blurred. I can't catch my breath . . . I am sweating all over."

Therapist: "Why does that mean you are dying?"

Patient: "Because this is what it is like to die."

Therapist: "How do you know?"

Patient: [after some reflection] "I guess I don't know. But I *think* these are signs of dying."

The patient's rule (premise) is that this combination of symptoms equals imminent death. In actuality, however, the signs (palpitations, difficulty in focusing, shortness of breath) are typical signs of an acute anxiety attack. (It is true, of course, that if associated with typical signs of organic disease the "anxiety symptoms" might be indicators of a serious threat to life.) The patient's ideation and anxiety become involved in a vicious cycle. Thoughts of dying lead to increasing anxiety, as manifested by the physiological symptoms; these symptoms, in turn, are interpreted as signs of imminent death.

How do these rules hypertrophy into an emotional

disturbance? Since the rules tend to be couched in extreme words, they lead to an extreme conclusion. They are applied as though in a syllogism.

Major premise: "If I don't have love, I am worthless."

Special case: "Raymond doesn't love me."

Conclusion: "I am worthless."

Of course, the patient does not report a sequence of thoughts in the form of a syllogism. The major premise (rule) is already part of his cognitive organization and is applied to the presenting circumstances. The patient may ruminate over the minor premise (the specific situation) and is certainly conscious of the conclusion.

The thinking disorder characteristic of psychological disturbance may be analyzed in terms of the operation of the rules. Such characteristic thinking aberrations as exaggeration, overgeneralization, and absoluteness are built into the framework of the rule and, consequently, press the person to make an exaggerated, overgeneralized, absolute conclusion. (Of course, in normal states, there are also more flexible rules, which tend to mitigate the more extreme rules that are prepotent in states of disturbance.) When the theme of the patient's preoccupation is related to his specific sensitivities, the more primitive rules tend to displace the more mature concepts. Once the patient accepts the validity of an extreme conclusion, he is more susceptible to an ever-increasing expansion of the primitive rules.

If, for instance, he succumbs to the notion, "Since my friends did not call me today, they regard me as unlovable and worthless," he may be drawn to accept this

conclusion as the premise for a more far-reaching one: "Since I am worthless, nobody will ever like me." This premise sets the stage for the following conclusion: "Without love, life is not worth living. Therefore, there is no point to my continuing to live."