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Part 2. Behavior: An Overview

It is the purpose of this chapter to discuss certain general principles and features of human behavior. We will begin with an overview of some of the ways with which people cope with the challenges and stresses of life. We will then briefly sketch the development of human behavior from infancy through adolescence, describe some of the general themes and vicissitudes in the period from young adulthood to old age and, finally, delineate those features characteristic of psychologic health and maturity.

It is hoped that this chapter will provide a useful background to the clinician in his basic conceptualization of personality function, in his seeking to understand behavioral responses to medical illness, and in the psychologic aspect of medical evaluation and management.

Some Basic Features of Human Coping Responses

In common with lower animals, the human being responds to stimuli, whether the stimuli originate in the external environment or from within himself. An outstanding differentiating feature of man is that his behavior is much less predictable than that of lower animals. As a consequence of the enormous complexity of variables that intervene between stimulus and response, the repertoire of human responses is incomparably larger than that of the next most highly evolved species. From a neurophysiologic point of view, one could attempt to describe this "enormous complexity of variables" in terms of that portion of the neuronal network of the central nervous system that is interposed, in any given instance, between the involved afferent and efferent peripheral nerve fibers. As important as this is, however, one cannot at this time give a useful account of the variables of human responses in neurophysiologic terms. While the findings of neurophysiology and neurochemistry are becoming increasingly relevant to the practice of clinical psychiatry, it is nonetheless evident that to approach the subjective and behavioral responses of human beings from a strictly neurophysiologic point of view would be analogous to evaluating the "answers" of a computer by examining its circuitry rather than by scrutinizing the way in which it has been programmed.

Approach and Avoidance

Perhaps a commonplace example will illustrate the preceding point.

Mrs. S. discovers a nodule in her right breast. Her first response is one of alarm but not panic. She immediately mentions the discovery to her husband and the next morning, after a night of fitful sleep, telephones her physician, explains the situation to him, and is given an appointment.

Her neighbor, Mrs. J., makes a similar discovery. She too responds with a feeling of concern but says nothing to anyone. In the ensuing two months, her husband observes that she is more moody than usual and seems a bit distant and preoccupied. One evening he too discovers the lump in her breast and over her protestations that it is "nothing" insists that she see the family physician.

In general terms, one could say that Mrs. S. coped with the disturbing "stimulus" by the response of "approach" while her neighbor's response to the same stimulus was one of "avoidance." It is of interest that Aitken-Swan and Paterson in reviewing the histories of 2700 patients with carcinoma of the breast, cervix, skin, and mouth found that in 45 percent, three months or more elapsed between the initial appearance of symptoms and reporting to the physician. Many of the patients who delayed going to the physician apparently did so to avoid having their fears of cancer confirmed.[1,7]

To understand fully the difference in response to the discovery of a nodule of the breast shown by these two patients would probably require an indepth study of both individuals. However, it is likely that a not-so-extensive study would enable one to gain partial comprehension of their behavior. Let us confine our attention to Mrs. J. Her history indicates that she has a tendency to respond to all threatening situations by putting her head in the sand and hoping they will somehow go away. Therefore her response to the discovery of a nodule in her breast turns out to be characteristic, ie, it is a feature of her character if one defines the latter as being comprised of relatively enduring attitudes and patterns of behavior. Further, it is learned that at the age of 12, Mrs. J. lost her mother who died of cancer and, at the time of this tragedy, she overheard some veiled criticisms of the physicians. As a consequence, Mrs. J. developed a rather fatalistic notion about the treatability of cancer and was distrustful of physicians. She may even have felt destined to suffer the same fate as her mother because she had felt inexplicably guilty following her mother's death, as if she may have been to blame in some way. This earlier family experience had reinforced her tendency to disregard anything having to do with cancer, including televised admonitions concerning early detection and treatment.

It should be noted that our limited knowledge of Mrs. J. does not enable us to say that she has a psychiatric illness. It is true that she tends to avoid facing unpleasant realities, but she may not be afflicted with a constellation of symptoms that would warrant the diagnosis of a specific neurosis. In further conversations with Mrs. J. it may be learned that she herself was quite unaware of some of the forces that contributed to her behavior, such as the influence of the early loss of her mother upon her feelings about herself. If this is the case, the interviewer may infer from the data available that this and other important determinants of the patient's behavior were *unconscious*.

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Further Elaboration of Coping Responses

The term "coping" usually connotes a type of response by which the individual successfully deals with a problem or adapts himself to a situation. If, however, one includes in this term behavior which is partially successful in allaying or preventing the emergence of an unbearable feeling, such as anxiety, the well-known defense mechanisms can be regarded as a category of coping responses.

In the normal paradigm, the individual "copes" with his environment (internal and external) by being alert to relevant cues. Perception of a problem or opportunity is followed by actively seeking more information about it and by assessing its significance through comparison of the present situation with related past experiences. This in turn arouses the person to adopt a course of action which he believes suitable to his ability, his situation, and his needs or goals. It is unlikely that anyone always responds to the manifold situations of life in this ideal manner. Defensive behavior, in which some aspect of reality is avoided, is used to some extent by all human beings at various times in their lives. There are a variety of ways by which people may avoid painful aspects of the external world or minimize anxiety engendered by intrapsychic conflict.[2,4]

Repression

Repression refers to the exclusion of feelings and ideas from conscious awareness. Repression is a basic defensive operation which may be supported by other defenses such as *conversion*.

A 30-year-old housewife complained of severe marital problems. She looked forward to the day when the younger of her two children would be old enough to begin school because at that point she would feel freer to separate from her husband. Understandably, she professed a strong determination to avoid becoming pregnant.

Three months after the initial visit, the patient reported that she had not menstruated for two months and was sure that she was pregnant. Having apparently "forgotten" the feelings expressed earlier, she stated that she was looking forward to having another baby. There was only one complication: she had recently developed numbness and weakness of both hands which, she stated, would prevent her from holding a baby.

Denial

Denial is a process in which the individual avoids awareness of some painful aspects of reality, such as severe loss, bodily illness, or associated feelings. Under some circumstances, partial denial may serve a useful purpose by giving the individual time to muster his resources and adapt to a difficult or traumatic situation.[5] Occasionally, an individual who is informed that he has a serious illness may not seem to be emotionally disturbed by the news, may efficiently tend to his affairs preparatory to entering the hospital, and only later show unmistakable evidence of apprehension and grief. On the other hand, in the case of Mrs. J., described above, the denial of the existence of the breast nodule was, of course, maladaptive.

Reaction Formation

Reaction formation occurs when the repression of a feeling or wish is bolstered by its replacement in conscious awareness with its opposite; the resulting behavior often strikes others as excessive or overdone. A common example is shown by the excessively polite person who may, however, unconsciously reveal his underlying hostility by being condescending.

Displacement

Feelings and attitudes toward one individual or event are directed toward another in displacement.

A 6-year-old boy showed little outward sign of grief following the sudden death of his father. Several months later he reacted to the accidental death of a friend's dog by crying and wailing as though he had lost someone very close to him.

Rationalization

More often than not, a given behavior is the outcome of more than one motivation. In rationalization, there is selective awareness of acceptable motivations and disavowal or unawareness of unacceptable ones. Thus a patient explains to the physician that he must postpone a needed diagnostic procedure because of prior commitments but does not acknowledge that he fears what the examination will show.

Projection

In projection, an attribute of the self, such as a feeling or impulse, is ascribed to the external world, usually to another person.

A surgeon, upon encountering a technical problem that taxes his skill, scolds the nurse-assistant for not knowing what instrument to hand him.

Regression

The individual adapts to a currently stressful situation by retreating to a mode of behavior characteristic of an earlier period of his life. Like all defenses, regression may serve a useful, adaptive purpose. For example, the regression that is virtually inevitable in seriously ill, hospitalized persons may facilitate acceptance of the therapeutic regimen. On the other hand, regression to behavior such as pouting, passivity, and demandingness is seriously maladaptive under many circumstances of adult life, although it is often rewarded by others who are involved with the regressively behaving person.

Personality Development

Students of human behavior have long been intrigued not only by the variability of human responses to nearly identical "stimuli" but also by the fact that a given individual tends to repeat patterns of behavior as he goes through life. This is one of the observations that had led to extensive examination of early childhood experiences, since detailed study of behavior patterns often reveals that they are traceable to the earliest periods of life that the subject can recall.

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Infancy and Childhood

There is little doubt that the long period of relative helplessness and dependency of the human infant is of profound psychologic significance. In the first months of life, the baby is utterly dependent for life-support upon the mother or her substitute. It is impossible to know what is going on in the mind of the preverbal infant, but it is known that all infants are by no means alike at birth. Some are relatively placid, sleep a lot, cry little, and adapt to an eating and sleeping schedule with ease. Others are noisy, very active, sleep less, and are more demanding. Still others are in between. These differences are among the innate, perhaps hereditary, features that play a role in personality development and which doubtlessly influence the way the mother responds to the infant.

At the beginning, the mother characteristically becomes involved with the infant in a love relationship which has a rather "narcissistic" coloring; the baby, which not so long ago was a part of her own body, continues to be felt as an extension of herself for awhile. She is exquisitely aware of when her baby is hungry, wet, or in pain. The initial relationship of the mother and infant is such an intimate and interdependent one that some authors have referred to it as "symbiotic" in that the well-being of both mother and child depend (in different ways) on their relationship with each other.

Separation and Individuation

As the infant develops and learns to sit up, crawl, walk, and acquire language, he slowly separates himself from the mother. This process of separation and individuation begins in the first year of life, and under normal circumstances progresses rapidly during the remainder of childhood.[6] During this period, the child can be described as incorporating countless experiences of being cared for and as drawing upon these experiences in learning to care for himself. With this in mind, it is apparent that normal maturation is thwarted by severe maternal neglect on the one hand and by excessive indulgence on the other. Most mothers seem naturally to be attuned to their child's increasing autonomy and experience an intermingling of sadness and joy in fostering it.

To return to the very early stage of development, it may be noted that the infant demands and usually receives quick gratification of his needs. It is not surprising that as he becomes aware of the existence of persons (parents) who meet these needs, he perceives them as godlike, ie, omniscient, omnipotent, and good. It is also inevitable that he will, for a while, believe in the magic power of his own thoughts and wishes, because at one time in his life he had but to cry and his needs would be met. Further, in the normal course of events in which the child has repeatedly had the experience that "being good" brings rewards and the opposite brings punishment, he will come to feel that when something good or bad (such as illness) happens to him, it is because he has done or thought something to deserve it; and, in varying degrees, this feeling persists throughout life.

Oedipal Phase

In the course of time, the child progressively develops the ability to tolerate the postponement of gratification, to relinquish unfulfillable wishes, and increasingly to take care of himself. By the third or fourth year, he has sufficiently mastered certain functions, such as walking, so that he now begins to use these functions somewhat automatically for his own purposes: he walks in order to go somewhere as opposed to concentrating on taking steps and keeping his balance. As Erikson has remarked, he is in a position to take the initiative and does so.[3]

At this stage it is not uncommon for children of both sexes to wish to have an exclusive relationship with mother and later, or alternatingly, with father. The intensity of these "oedipal" strivings may in part be determined by constitutional factors and is certainly influenced by the parents' behavior. In any event, the wish to take father's place with mother or vice versa is one with which the child is deeply conflicted: he loves the rival parent and does not wish to lose him or her, he feels afraid of punishment for his bad wishes, and he feels hopelessly unqualified. At this stage of development, the child, at least for the time being, normally represses his impossible dreams and achieves an identification with his parents whom he both loves and envies. He internalizes aspects of them, their values and ideals, ie, he develops a conscience, an inner mechanism of approval and prohibition, and so no longer regulates his behavior just in terms of external response: he is now capable of feeling guilt as well as shame. Being in possession of an inner set of values, ideals, and prohibitions (which, to be sure, will continue to develop and be modified), the child is now in a better position to venture forth from the home to kindergarten and school.

Early School Years

The span of years from about age 6 to puberty is a time which Freud referred to as the "latency" period in the sense that it is one in which sexual drives and interests, though by no means absent, are comparatively dormant. This is a period of life in which there is consolidation, modification, and broadening of coping skills which were developed in the preceding years. During these years the child is progressively given more opportunities and encouragement to cope with life outside of home: in the classroom, the playground, the neighborhood, overnight visits with friends, and eventually a few weeks at camp. His exposure to peers and teachers gives him important opportunities to confirm or correct his notions about values and about what the "world" expects of people which he had heretofore derived from his immediate family. Boys and girls of this period tend to associate predominantly with members of their own sex, having special friends or chums, forming clubs and having secrets but usually without the preoccupation with defiance of authority so common at a later stage.

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During these years there is a remarkable display of interest in a wide variety of subjects. Hobbies are cultivated, sometimes several at a time, and are often pursued to considerable depth and with much industry before being dropped. Erikson has commented that this is a period in which the individual becomes acquainted with the technology of his culture.[3] He is learning how to get along in the world so he can eventually provide for himself and others. If the individual has a successful experience in the grade school period, his sense of confidence in himself is justifiably enhanced. On the other hand, if the youngster has encountered learning difficulties, or has had serious failures, or has been confronted with a hostile and prejudiced environment, he may develop a feeling of inferiority and/or a self-defeating attitude of cynicism.

Adolescence

This period, spanning the years from the onset of puberty to about the age of 21, is one in which the child becomes an adult. Although normal development during adolescence is not invariably accompanied by periods of considerable turbulence, it frequently is. For this reason the assessment of adolescent behavior as being normal or pathologic may be quite difficult, requiring considerable experience on the part of the interviewer and sometimes requiring repeated observations over a period of time. This is an important point because premature or unwarranted labeling of the adolescent may, in itself, have undesirable consequences.

In the "phallic" phase of development (age three to six years) the child manages the conflicts associated with strivings for an exclusive relationship with one or both parents by identification with them, by developing an inner set of ideals and prohibitions, and by repressing his oedipal desires. At the time of puberty, when sexual sensations and drives come to the fore along with the beginning development of secondary sexual characteristics, the repressed (but not yet relinquished) oedipal strivings are mobilized and arouse conflict and anxiety at puberty as they had done previously. The degree to which this poses a challenge to the boy or girl at puberty depends upon the intensity of the repressed oedipal wishes and the strength and speed of development of sexual urges.

In any event, it is to be expected that with the "awakening" of genital sexuality at puberty, the adolescent will shift his emotional and libidinal investment to persons other than members of his own family, ie, to teachers, coaches, youthful leaders at school or in the community, and to his peers of the same or opposite sex. The adolescent may reinforce his move away from his parents by developing an attitude of indifference toward them. If he has not yet made the move away from his parents, he may temporarily guard himself from the possible intrusion of sexuality into his affectionate ties to them by developing an oppositional attitude and by becoming resentful, rebellious, and debasing of them. He may also utilize his expanding intellectual abilities by attempting to deny sexual, bodily feelings and concentrating his attention on abstract issues relating to art, religion, philosophy, and various forms of idealism.

These phenomena of early adolescence, namely, the displacement of emotional investment away from the parents to others, the development of oppositional attitudes, and relatively heavy emphasis on things intellectual do not, of course, arise solely in response to the anxiety-generating conflicts associated with sexuality. They are also anticipatory manifestations of ever greater emancipation from the parents and the assumption of an adult role. Undoubtedly, the extreme, almost caricatured forms of "independence" in early adolescence arise in part because the adolescent himself is ambivalent about growing up. He experiences, from time to time, a regressive pull, a desire to be a child again, and part of his extreme behavior is in reaction to these feelings within himself.

During adolescence, the individual normally becomes increasingly able to form lasting and comfortable relationships outside the home, to integrate sexual feelings in his relationship with others, and develops enough confidence in his own ideas and ideals that he can once more relate with his parents without feeling threatened. At the end of adolescence or the beginning of adulthood, he has developed a relatively stable set of values and goals, a sense of who he is and of what he wants to do with his life (at least in general terms); that is, he has developed an identity of his own. This development is greatly facilitated by giving the adolescent recognition, in the sense of encouraging him to accept an appropriate degree of responsibility and independence, tempered by the judicious proffering of support, guidance, and tolerance when he yields to the "regressive pull" and temporarily reverts to childish behavior.

The psychologic problems of adolescence are too numerous and complex for us to do justice to them here and we will limit ourselves to a few general comments.

In making the critically important emotional move away from the parents in the early teens, the adolescent will be hampered if, for any reason, he fears rejection, especially by his peers. Anything which makes him "too different" may arouse such fear, such as being too bright, too dull, too fat, too skinny, or having some physical blemish such as acne. The physician does well to take seriously the teenager who presents himself or herself for help with acne, obesity, or any other difficulty which may become the nucleus of a serious psychosocial problem.

The adolescent will also have difficulty in achieving emancipation if he has sensed that his parents do not want him to grow up; in this instance, he is hampered not so much by fear as by guilt. This type of problem is particularly apt to occur if he or she is the youngest of the children, or if one

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of the parents has a neurotic need to keep the youngster dependent.

Failure to achieve an enduring sense of values, goals, and vocational or career direction by the time of young adulthood is sometimes referred to as identity diffusion or identity crisis. Grave emotional illness may first become manifest around the transition stages of puberty and the end of adolescence.

Adulthood

In adulthood, people continue to learn, change, and grow though usually not as rapidly or as dramatically as during childhood or adolescence.

With the successful denouement of adolescence, the young adult settles into or is clearly on a path toward careers of vocation, marriage, parenthood, or all three. In settling into a vocational career the healthy young person chooses his life's work for himself, though, to be sure, his choice is partially determined by identifications he has made with the significant other people in his life and he is doubtlessly influenced by encouragements or warnings that have come his way. In making his career choice, the young person attempts to match his own interests and aptitudes, as he assesses them, with the opportunities for training and for obtaining work which he believes are available to him. He must attain the technical competence required by his chosen field and must have the interpersonal skills necessary to form relatively lasting and productive relationships with superiors, peers, and underlings. It is not at all uncommon for the young adult to feel a certain amount of insecurity or anxiety at this stage of life because he has not yet had enough experience to be confident that his own abilities (as he assesses them) are sufficient for him to "make it" out in the world. The anxiety arising from a sense of disparity between his self-image, or what he is, and his image of what he ought to be may at times lead the young adult to withdraw or retreat from challenging situations on the one hand or, at the other extreme, to develop a defensive exaggeration of his abilities; but usually these swings in attitude are not as marked as those of adolescence. This type of concern is one of the factors related to the observation that neuroses, which are characterized by anxiety or symptomatic defenses against anxiety, often have their onset in young adulthood.

Most young adults get married and have children. Successful marriage requires the individual to have a capacity for intimacy with another person. Persons involved in an intimate relationship have enough trust in each other and enough confidence in themselves to reveal their feelings and needs while at the same time respecting each other's autonomy and privacy. Conflicts between the demands of work and those of the family are not uncommon and when they occur both parties of the marriage are called upon to order their priorities in a practical and flexible way.

Those young adults who marry and raise children have the enlightening experience of piloting someone else through the channels they themselves have traversed in the not-so-distant past. In doing so, the young parents are apt to encounter issues, problems, and conflicts in their children which are reminiscent of their own experiences at various stages of development. In parenthood, young adults not only give where they once received, and are depended upon, but also develop new dependencies on each other and their children which are not altogether unlike those from which they were previously "emancipated" through earlier waves of separation and individuation.

Most young adults have, to some degree, an illusion of indestructibility and an understandable feeling of having an abundance of time in which to live and to accomplish their plans. Typically, the young person looks upon illness, disability, and death as rather abstract or remote possibilities if indeed he thinks about them at all. This of course changes markedly as the person gets into middle age.

Middle age bears some resemblance to adolescence in that it too is a period in which significant biologic changes occur in the individual. The male observes that he has less hair on his head and more on his chest; the torso may become more rounded, especially the lower abdomen, and the legs may become thinner and less strong; various health problems, some minor and others more major, often develop; there is usually a perceptible, slow decline in resilience or endurance; while intellectual functions are usually well preserved there may nonetheless be a decrease in the person's inclination to learn new concepts. The menopause occurs signaling to the woman that the child-bearing period of her life has come to a close.

If libidinal drives wane in middle age, or if their waning is anticipated (correctly or not) by the individual, there may be an apparent recrudescence of sexual interest. This may in part arise from a feeling, common among middle-aged persons, that life is passing them by. Thus, it is as if certain gratifications must be achieved "now or never." This is an especially pressing issue if the individual feels cheated by life whether as a result of his or her own constrictedness, or because of a too-early marriage which deprived the person of sufficient experimentation, or for some other reason. The "cheated" person, feeling that his sexual drives or abilities are on the wane or soon will be, may set about to make up for lost time. This is the so-called dangerous age for both sexes and may be accompanied by an adolescentlike striking out from home base, getting involved in affairs, or perhaps divorce and a new marriage. This may be an occasion of profound pathos, a frenetic search for new beginnings, new experiences, and a flowering of pseudoyouthful behavior which may mask underlying despair.

Middle age is also a time when the individual may, in a healthy and constructive way, take stock of himself and his situation. Sometimes this stock-taking results in the appropriate relinquishment of long-held but unrealizable ambitions. This relinquishment, which usually occurs piecemeal,

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is often accompanied by sadness or depression but it may also result in a less burdened life, one in which the individual is fairly "settled," as though he has hit his stride and is continuing to be productive while released from the strain of burdensome ambitions, and is thus freer to enjoy the fruits of his labor. As this occurs, the individual often begins to devote a somewhat larger share of his or her time and energy to the welfare of the community at large, including the needs of the older and younger generations.

Relinquishment arising from a different source may also occur in middle life. For example, the giving up of old roles and satisfactions and the search for new ones may be necessitated by the departure of the youngest child for college, career, or marriage, or by other environmental circumstances which disrupt or terminate important roles and relationships. It is most frequently in this period of life that the individual experiences the deaths of his parents and it is not rare for a sibling or a peer to become seriously ill or to die. These experiences, in combination with the biologic changes taking place in the person, help to reduce or abolish the youthful illusion of indestructibility. The middle-aged person experiences time very differently than do younger persons: time seems to pass ever more quickly and the person becomes increasingly aware of the essential transience of the human condition. With this change in his Weltanschaung, the middle-aged person often develops a more peaceful and keen appreciation of experiences in the "here and now." All of these and other changes of middle life may result in a reordering of priorities, a casting aside of false idols, and a focusing on the things "that really matter" in life: in a word, integrity and wisdom.

Eventually, the diminishments of old age result in a narrowing of functions, varying degrees of disability, and, in conjunction with a decreasing circle of friends and family from sickness and death, there ensues a progressive restriction of activities and increased dependence on surviving relatives and institutions. In some ways, of course, the increased dependence upon others for life support in old age can be looked upon, as it classically has been, as a "second childhood." But the comparison of old age with childhood is quite superficial. The elderly person, dependent though he may be, is often called upon to make adjustments to new and bewildering situations and to deal somehow with the inevitable multiple losses that impinge upon him, including the near-term prospect of final separation from all he has ever known. It is little wonder that regressive behavior and depression are so commonly seen from middle age to the end of the life span. As with the adolescent, a most vital factor in helping the elderly person to live out his life with a sense of wholeness and dignity is that of continuing to recognize him as a person who still counts, who is loved, and who is useful and needed.

Some Characteristics of Psychologic Health and Maturity

It seems fitting to close this chapter with a brief description of some of the characteristics which are associated with the attainment of health and maturity. This is not the same as attempting to describe a particular personality type or profile because the several features mentioned below are present in people who are otherwise not alike at all.

The psychologically healthy and mature individual, while interested and responsive to others, has a relatively stable, inwardly derived feeling of self-esteem. He is able realistically to appraise his own abilities and limitations and has developed life goals in accordance with them. In the pursuit of these goals he is able to foresake the immediate gratification of desires when this is necessary.

It is a mark of maturity to be able to place trust in others to a degree that is appropriate to the current situation and to past experiences with the persons involved. The mature person is able to form lasting, important relationships in which he feels empathy and love.

In general, the coping responses of the mature person are based upon accurate assessment of present reality in the light of relevant past experiences and are therefore much less rigidly stereotyped or repetitive than are those of immature and neurotic individuals. This is not to say, however, that the mature person does not exhibit patterns of behavior which reflect his own particular attitudes, values, goals, and habitual modes of coping.

The psychologically healthy person is not, of course, free of problems. When he experiences a failure, as he inevitably will, he is disappointed but not devastated. No one is totally conflict-free and everyone has moments of feeling anxious or frightened and thus has developed his or her own repertoire of defenses. Similarly the healthy person may have minor fluctuations in mood for no apparent reason but these are generally brief and not incapacitating.

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Procedures in Family Practice

These articles should describe the role, indications, contraindications, technique and related aspects of diagnositic or therapeutic procedures of value in everyday practice. Papers should be practical and specific and include illustrations where necessary.

Family Practice Grand Rounds

This feature will normally be based on an interactive teaching conference and should illustrate one or more of the major concepts of family medicine. For example, such issues as these may be dealt with: the family physician's role in care of specific clinical problems, continuity of care, preventive measures and rehabilitation, behavioral aspects relating to impact of illness on the family, and coordination of care utilizing consultants and other community resources. Family Practice Grand Rounds should include input by family physicians, family practice residents, and representatives from other clinical disciplines and allied health fields as appropriate. Articles could be presented in numerous ways based on the case at hand.

Family Practice Forum

This feature is intended as a forum for exchange of opinion on issues related to the developing specialty of family practice. Statements of opinion and position papers should be limited to a maximum length of four typewritten pages and should include supporting references when applicable.

All articles should include a careful compilation of bibliography.

Letters to the Editor are also encouraged, including observations, opinion, corrections, and comment on topics under discussion in the journal.

Communications

The purpose of the COMMUNICATIONS section is to provide a medium for rapid publication of new ideas in clinical, educational or research areas, brief case reports, and preliminary results of clinical or educational research projects. Articles for this section are ABSOLUTELY LIMITED to four double-spaced manuscript pages, and abstracts are not required.

Manuscripts

Contributions will be considered for publication with the understanding that they are contributed solely to THE JOURNAL OF FAMILY PRACTICE and have not been previously published elsewhere. The original and two copies of the complete manuscript should be submitted. The transmittal letter should designate one author as correspondent. Authors are responsible for all statements made in their work. Accepted manuscripts become the permanent property of the journal. Manuscripts should be submitted to:

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All copy must be typewritten, double-spaced, on 8½ x 11 inch, heavy-duty white bond paper, with generous margins on each page—at least 1½ inches at top, bottom, and left, and 1 inch at right. The first page of the manuscript should give the title of the article, name(s) and affiliation(s) of author(s) and any acknowledgements. Titles should be short, specific, and clear, and subtitles may be used as desired. The second page should supply an abstract of not more than 200 words. The abstract replaces a summary and should be a factual (not descriptive) summary of the paper, including the principal conclusions of the article. All pages after the title page should include a running head typed in the upper left-hand corner, consisting of a shortened form of the title and the surname of the senior author. The text should avoid extensive outline formats.

References

References will be critically examined at the time of editorial review. Personal communications should not be included. The style of Index Medicus should be followed in preparing references. References should be numbered consecutively as they appear in the text and arranged in the order of citation, not alphabetically. References to a journal, a book, an edited book, a chapter in an edited book, a report, a

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5. Meeting the challenge of family practice. The Report of the Ad Hoc Committee on Education for Family Practice of the Council on Medical Education. Chicago, AMA, 1966

6. Froelich RE: Behavioral sciences in family medicine. Presented at Workshop for Consultants in Family Practice, AAGP, Kansas City, Mo, October 14, 1969

7. US Department of Health, Education, and Welfare, Public Health Service, Bureau of Health Manpower: Health Manpower Perspective: 1967. PHS Publication 1667. Washington, DC, US Government Printing Office, 1967, p 12

Tables

Tables should be self-explanatory, clearly organized and supplemental to the text of the manuscript. Each table should include a title, be typed on a separate sheet, and numbered in order of its appearance in the text. Tables should be used to compare or classify information for easier understanding and should not duplicate data included in the text or figures.

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The preceding letter was referred to Dr. Stephens who responds as follows:

In response to Dr. Mitchell's letter, I do not feel that we have substantial disagreements. The paragraphs referring to "quacks and nostrums" and "doctors of the people" was meant to be descriptive of the situation around the turn of the century and was in no sense a defense of one "brand" of medicine against all others. As a matter of fact none of the healing professions were scientific until after the establishment of the germ theory. I agree with Dr. Mitchell that the germ theory did not eradicate quacks and nostrums and that it is not an adequate explanation for all human illness, but it was a *model* of disease that was revolutionary in its effect on medicine and society. The point I wanted to make is that the AMA organized much of its reform activity around this issue in the early decades of the 20th century. (I am already on the record in this Journal in regard to the philosophical inadequacies of biological reductionism as an outgrowth of the germ theory *(J Fam Pract 2:423, 1975)*.

Dr. Mitchell's comments on the "clinical wisdom" paper are largely editorial and do not require a response except for his "horror" at my suggestion that a student be taught to use a placebo medication. I have been criticized about this by others and I am ready to change my mind and withdraw that objective. What should be substituted is an objective requiring the use of suggestion as a therapeutic method and perhaps another built around the recognition and use of the placebo effect. I have not tried to formulate these in precise language but I think it can be done.

Finally, in spite of Dr. Mitchell's "gasping in shock" about my objective on personality diagnosis, I will stick to my guns on this one, and to support my position I refer him to MacKinnon and Michels *(The Psychiatric Interview in Clinical Practice. Philadelphia, WB Saunders, 1971)* and to Shapiro *(Neurotic Styles. New York, Basic Books, 1965)*. Mainstream psychiatry has long since abandoned the notion that one does not have to make a diagnosis in order to treat the patient. Only those who have an antihistorical bias believe that you can ignore the past, which is what diagnosis is all about.

I appreciate Dr. Mitchell's taking the time and effort to comment on my paper. I feel that we have much in common in our understanding of human illness.

G. Gayle Stephens, MD
School of Primary Medical Care
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Huntsville

Erythromycin in Staphylococcal Infections

To the Editor:

In reference to the article by Stephen D. Boren, MD *(Treatment of Staphylococcal infections. J Fam Pract 4:1163, 1977)*, I take exception to the unreferenced statement regarding twice daily dosage of erythromycin for the treatment of staphylococcal infections.

According to Weinstein,[1] peak plasma concentrations are achieved in one to four hours following oral administration of erythromycin base or the stearate. He states further that these concentrations decline strikingly by the fourth to sixth hour. The serum half-life of erythromycin has been reported to be between three to six hours.[2]

Based on the assumption that the maintenance of therapeutic concentrations of an antimicrobial agent will achieve greater cure rates from bacterial infection, the administration of erythromycin every 12 hours seems

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