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The Role of Attachment in Personality Development and Psychopathology

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During the first third of this century the two great proponents of developmental psychiatry were Adolf Meyer and Sigmund Freud. Both believed that the seeds of mental health and ill health were sown in childhood and that to understand the present-day functioning of a person it is necessary to know how he or she has become the man or woman we meet with today.

In their approaches to the field Meyer and Freud took very different routes. Initially Freud focused on traumatic family relationships, including incest, but soon, for reasons that remain obscure, he claimed that the real-life events he had originally invoked as pathogenic had in fact never occurred and that the patient had only imagined them. Thenceforward the emphasis was on fantasy. Consequently Freud's interests became focused on a person's internal world of mental processes, especially on the powerful influence that unconscious processes have on the way a person feels, thinks, and behaves and, above all, on the defensive processes that actively keep them unconscious.

Meyer, by contrast, continued to emphasize the part played by real-life events in shaping personality, but he was never very specific about the nature of the ones that matter, nor did he

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advance any theory of how being exposed to some event or situation affects a person's mental state. Nonetheless, Meyer's approach played a major part in promoting the mental hygiene movement and child psychiatry. In both these revolutionizing movements the notion that the environment in which a child grows up plays a critical part in determining his future mental health has always been a stubbornly held if ill-defined assumption. Moreover, these are the fields in which Freud's original ideas about the role of childhood trauma have not only persisted but have borne valuable fruit.

We can see now that the tremendous strides being made today in developmental psychiatry owe a great deal to both these pioneers. To Adolf Meyer is due the credit for having continued to emphasize the influential role of the events and situations a person meets with during his development. To Sigmund Freud is due the credit for having emphasized the influence on how a person thinks, feels, and behaves that is exerted by his internal world, namely by the way he perceives, construes and structures the events and situations he encounters. Today we know that the central task of developmental psychiatry is to study the endless interaction of internal and external and how the one is constantly influencing the other, not only during childhood but during adolescence and adult life as well.

Evidence that happenings within the family during childhood and adolescence play a major role in determining whether a person grows up to be mentally healthy is now formidable, and a review of the important epidemiological findings has recently appeared (Rutter, 1985). For that reason, in this chapter I am presenting only a limited amount of data, some epidemiological and retrospective and some ethological and prospective, and am giving most attention to the conceptual framework within which I believe the different sets of findings can best be comprehended.

As an example of retrospective data I draw on the findings of the group led by George Brown and Tirril Harris which has been undertaking sophisticated epidemiological studies to explore the roles of family experience and other social variables as antecedents of depressive and anxiety disorders in adult life.

As an example of prospective data I draw on the work of the developmental psychologists who have been inspired by and are busy expanding the brilliant pioneering studies of Mary Ainsworth into the development of a young child's capacity to make intimate, emotionally mediated relationships with parents. Since the findings from these two quite different approaches are highly compatible, the resulting scientific structure can be likened to a trilithon made up of two stout pillars of evidence and a crosspiece of theory. A major conclusion is that, whatever influence variations in genetic endowment may exert on personality development and psychopathology, an immense influence is unquestionably exerted by environmental variables of the kinds now being systematically explored.

For many years sensitive clinicians with a psychoanalytic orientation have been aware that a person's mental state is deeply influenced by whether his intimate personal relationships are warm and harmonious or tense, angry, and anxious, or else emotionally remote, possibly nonexistent. Among clinicians so oriented a variety of terms are in use: significant other, dependency, symbiosis, object relations. Nevertheless, although a field of manifest importance to psychiatry, there has been no agreement how best to conceptualize it. A number of theoretical systems have been proposed, almost all of them derived in some sort of way from psychoanalysis, and a mountain of jargon has accumulated. Yet none has generated sustained productive research. In scientific quarters the whole field has struggled for recognition.

In recent years a new conceptual framework, known as attachment theory, has been proposed (Bowlby, 1969, 1973, 1980) which is providing explanations for existing data and promoting rapidly expanding research programs in developmental psychology and developmental psychopathology. Whereas Freud in his scientific theorizing felt confined to a conceptual model that explained all phenomena, whether physical or biological, in terms of the disposition of energy, today we have available conceptual models of much greater variety. Many draw on such interrelated concepts as organization, pattern, and information, while the purposeful activities of biological organisms can be conceived in terms of control systems struc-

tured in certain ways. The world of science in which we live is radically different from the world Freud lived in at the turn of the century, and the concepts available to us immeasurably better suited to our problems than were the very restricted ones available in his day. Before describing this new conceptual framework, some account of why new concepts have been introduced and how the field has evolved may be of interest.

The Evolution of a New Conceptual Framework

Deprivation of Maternal Care and Its Ill Effects

The origins of the new framework lie in observations made during the late 1930s and early 1940s. At that time a number of clinicians on both sides of the Atlantic, mostly working independently of each other, were making observations of the ill effects on personality development of prolonged institutional care and/or frequent changes of mother-figure during the early years of life. Influential publications followed, including those of Lauretta Bender (Bender and Yarnell, 1941; Bender, 1947), Dorothy Burlingham and Anna Freud (1942, 1944), William Goldfarb (1943a, b, and c; and six papers summarized in Goldfarb, 1955), David Levy (1937), René Spitz (1945, 1946), and myself (Bowlby, 1940, 1944). As each of the authors was a qualified analyst (except Goldfarb, who trained later), it is no surprise that the findings created little stir outside analytic circles.

Then, in late 1949, an imaginative young British psychiatrist, analytically oriented and recently appointed to be Chief of the Mental Health Section of the World Health Organization, stepped in. Requested to contribute to a United Nations study of the needs of homeless children, Ronald Hargreaves[1] decided to appoint a short-term consultant to report on the mental health aspects of the problem and, knowing of my interest in the field, invited me to undertake the task. For me this was a golden opportunity. After five years as an army psychiatrist, I

[1] Ronald Hargreaves's premature death in 1962 when professor of psychiatry at Leeds was a grievous loss to preventive psychiatry.

had returned to child psychiatry determined to explore further the problems I had begun working on before the war at the London Child Guidance Clinic; I had already appointed as my first research assistant James Robertson, a newly qualified psychiatric social worker who had worked with Anna Freud in the Hampstead Nurseries during the war. The six months I spent with the World Health Organization in 1950 gave me the chance not only to read the literature and discuss it with the authors but also to meet many others in Europe and the United States with experience of the field. Soon after the end of my contract I submitted my report, published early in 1951 as a WHO monograph entitled *Maternal Care and Mental Health.* In it I reviewed the far from negligible evidence then available regarding the adverse influences on personality development of inadequate maternal care during early childhood, called attention to the acute distress of young children who find themselves separated from those they know and love, and made recommendations of how best to avoid, or at least mitigate, the short- and long-term ill effects. During the next few years this report was translated into a dozen languages and appeared also in a cheap abridged edition in English (Bowlby, 1965).

Influential though the written word may often be, it has nothing like the emotional impact of a movie. Throughout the 1950s Rene Spitz's early film *Grief: A Peril in Infancy* (1947), followed soon after by James Robertson's *A Two-Year-Old Goes to Hospital* (1952), had an enormous influence. Not only did the two films draw the attention of professional workers to the immediate distress and anxiety of young children in an institutional setting; they also proved powerful instruments for promoting changes in practice. In this field Robertson was to play a lasting part (e.g., Robertson, 1958, 1970).

Although by the end of the 1950s a great many of those working in child psychiatry and psychology and in social work, and some also of those in pediatrics and sick children's nursing, had accepted the research findings and were implementing change, the sharp controversy aroused by the early publications and films continued. Psychiatrists trained in traditional psychiatry and psychologists who adopted a learning theory approach never ceased to point to the deficiencies of the evidence

and to the lack of an adequate explanation of how the types of experience implicated could have the effects on personality development that were claimed. In addition, many psychoanalysts, especially those whose theory focuses on the role of fantasy in psychopathology to the relative exclusion of the influence of real-life events, remained unconvinced and sometimes very critical. Meanwhile research continued. For example, at Yale Sally Provence and Rose Lipton (1962) were making a systematic study of institutionalized infants in which they compared their development with that of infants living in a family. At the Tavistock Clinic members of my small research group were active collecting further data on the short-term effects on a young child of being in the care of strange people in a strange place for weeks and sometimes months at a time—see especially the studies by Christoph Heinicke (1956) and Heinicke and Westheimer (1966)—while I addressed myself to the theoretical problems posed by our data.

Meanwhile the field was changing. One important influence was the publication in 1962 by the World Health Organization of a collection of articles in which the manifold effects of the various types of experience covered by the term *deprivation of maternal care* were reassessed. Of the six articles, by far the most comprehensive was by my colleague Mary Ainsworth (1962). In it she not only reviewed the extensive and diverse evidence and considered the many issues that had given rise to controversy but also identified a large number of problems requiring further research.

A second important influence was the publication, beginning during the late fifties, of Harry Harlow's studies of the effects of maternal deprivation on rhesus monkeys; and once again film played a big part. Harlow's work in the United States had been stimulated by Spitz's reports. In the United Kingdom complementary studies by Robert Hinde had been stimulated by our work at the Tavistock. For the next decade a stream of experimental results from those two scientists (see summaries in Harlow and Harlow, 1965; Hinde and Spencer-Booth, 1971), coming on top of the Ainsworth review, undermined the opposition. Thereafter, nothing more was heard of the inherent

implausibility of our hypotheses, and criticism became more constructive.

Much of course remained uncertain. Even if the reality of short-term distress and behavioral disturbance is granted, what evidence is there, it was asked, that the ill effects can persist? What features of the experience, or combination of features, are responsible for the distress? And, should it prove true that in some cases ill effects do persist, how is that to be accounted for? How comes it that some children seem to come through very unfavorable experiences relatively unharmed? How important is it that a child should be cared for most of the time by one principal caregiver? In less developed societies, it was claimed (wrongly as it turns out), multiple mothering is not uncommon. In addition to all these legitimate questions, moreover, there were misunderstandings. Some supposed that advocates of the view that a child should be cared for most of the time by a principal mother-figure held that that had to be the child's natural mother—the so-called blood-tie theory. Others supposed that, in advocating that a child experience a warm, intimate, and continuous relationship with his mother (or permanent mother-substitute), proponents were prescribing a regime in which a mother had to care for her child 24 hours a day, day in and day out, with no respite. In a field in which strong feelings are aroused and almost everyone has some sort of vested interest, clear unbiased thinking is not always easy.

The monograph *Maternal Care and Mental Health* has two parts. The first reviews the evidence regarding the adverse effects of maternal deprivation; the second discusses means for preventing it. What was missing, as several reviewers pointed out, was any explanation of how experiences subsumed under the broad heading of maternal deprivation could have the effects on personality development of the kinds claimed. The reason for this omission was simple: the data were not accommodated by any theory then current, and in the brief time of my employment by WHO there was no possibility of developing a new one.

The Child's Lie to His Mother: Attachment

At that time it was widely held that the reason a child develops a close tie to his mother is that she feeds him. Two

kinds of drive are postulated, primary and secondary. Food is thought of as primary; the personal-relationship, referred to as "dependency," as secondary. This theory did not seem to me to fit the facts. For example, were it true, an infant of a year or two should take readily to whomever feeds him and this clearly was not the case. An alternative theory, stemming from the Hungarian school of psychoanalysis, postulated a primitive object relation from the beginning. In its best-known version, however, the one advocated by Melanie Klein, the mother's breast is postulated as the first object, and the greatest emphasis is placed on food and orality and on the infantile nature of dependency. None of these features matched my experience of children.

But if the current dependency theories were inadequate, what was the alternative?

During the summer of 1951 a friend mentioned to me the work of Konrad Lorenz on the following responses of ducklings and goslings. Reading about this and related work on instinctive behavior revealed a new world, one in which scientists of high caliber were investigating in nonhuman species many of the problems with which we were grappling in the human, in particular the relatively enduring relationships that develop in many species, first between young and parents and later between mated pairs, and some of the ways in which these developments can go awry. Could this work, I asked myself, cast light on a problem central to psychoanalysis, that of "instinct" in humans?

Next followed a long phase during which I set about trying to master basic principles and to apply them to our problems, starting with the nature of the child's tie to his mother. Here Lorenz's work on the following response of ducklings and goslings (1935) was of special interest. It showed that in some animal species a strong bond to an individual mother-figure could develop without the intermediary of food: for these young birds *are not fed by parents* but feed themselves by catching insects. Here then was an alternative model to the traditional one, and one that had a number of features that seemed possibly to fit the human case. Thereafter, as my grasp of ethological principles increased and I applied them to one clinical problem

after another, I became increasingly confident that this was a promising approach. Thus, having adopted this novel point of view, I decided to "follow it up through the material as long as the application of it seems to yield results" (to borrow a phrase from Freud, 1915).

From 1957, when "The Nature of the Child's Tie to His Mother" was first presented (Bowlby, 1958) through 1969, when *Attachment* appeared until 1980 with the publication of *Loss*, I concentrated on this task. The resulting conceptual framework[2] is designed to accommodate all those phenomena to which Freud called attention—for example, love relations, separation anxiety, mourning, defense, anger, guilt, depression, trauma, emotional detachment, sensitive periods in early life—and so to offer an alternative to the traditional metapsychology of psychoanalysis and to add yet another to the many variants of the clinical theory now extant. How successful these ideas will prove only time will tell.

As Kuhn has emphasized, any novel conceptual framework is difficult to grasp, especially so for those long familiar with a previous one. Of the many difficulties met with in understanding the framework advocated, I describe only a few. One is that, instead of starting with a clinical syndrome of later years and trying to trace its origins retrospectively, I have started with a class of childhood traumata and tried to trace their sequelae prospectively. A second is that, instead of starting with the private thoughts and feelings of a patient, as expressed in free associations or play, and trying to build a theory of personality development from those data, I have started with observations of the behavior of children in certain sorts of defined situation, including records of the feelings and thoughts they express, and have tried to build a theory of personality development from there. Other difficulties arise from my use of concepts such as control system (instead of psychic energy) and developmental pathway (instead of libidinal phase) which, although now firmly established as key concepts in all the biological sci-

[2] This is the term Thomas Kuhn (1974) now uses to replace "paradigm," the term he used in his earlier work (1962).

ences, are still foreign to the thinking of a great many psychologists and clinicians.

Having discarded the secondary drive (dependency) theory of the child's tie to his mother, and also the Kleinian alternative, a first task was to formulate a replacement. This led to the concept of attachment behavior as a special class of behavior with its own dynamics distinct from the behavior and dynamics of either feeding or sex, the two sources of human motivation for long widely regarded as the most fundamental. Strong support for this step soon came from Harlow's finding that in another primate species—rhesus macaques—infants show a marked preference for a soft dummy "mother," despite its providing no food, to a hard one that does provide it (Harlow and Zimmermann, 1959).

Attachment behavior is any form of behavior that results in a person attaining or maintaining proximity to some other clearly identified individual who is conceived as better able to cope with the world. It is most obvious whenever the person is frightened, fatigued, or sick, and is assuaged by comforting and caregiving. At other times the behavior is less in evidence. Nevertheless, for a person to know that an attachment figure is available and responsive gives him a strong and pervasive feeling of security, and so encourages him to value and continue the relationship. While attachment behavior is at its most obvious in early childhood, it can be observed throughout the life cycle, especially in emergencies. Since it is seen in virtually all human beings (though in varying patterns), it is regarded as an integral part of human nature and one we share (to a varying extent) with members of other species. The biological function attributed to it is that of protection. To remain within easy access of a familiar individual known to be ready and willing to come to our aid in an emergency is clearly a good insurance policy—whatever our age.

By conceptualizing attachment in this way, as a fundamental form of behavior with its own internal motivation distinct from feeding and sex, and of no less importance for survival, the behavior and motivation are accorded a theoretical status never before given them—though parents and clinicians alike have long been intuitively aware of their importance. Hitherto

the terms *dependency* and *dependency need* have been used to refer to them, but these terms have serious disadvantages. In the first place, dependency has a pejorative flavor; in the second, it does not imply an emotionally charged relationship to one or a very few clearly preferred individuals; and, in the third, no valuable biological function has ever been attributed to it.

It is now thirty years since the notion of attachment was first advanced as a useful way of conceptualizing a form of behavior of central importance not only to clinicians and to developmental psychologists but to every parent as well. During that time attachment theory has been greatly clarified and amplified. The most notable contributors have been Robert Hinde, who in addition to his own publications (e.g., 1974) has constantly guided my own thinking, and Mary Ainsworth, who from the late fifties on has pioneered empirical studies of attachment behavior both in Africa (1963, 1967) and in the U.S. (Ainsworth and Wittig, 1969; Ainsworth, Blehar, Waters, and Wall, 1978) and has also helped greatly to develop theory (e.g., 1969, 1982). Her work, together with that of her students and others influenced by her (e.g., Sroufe and Waters, 1977; Sroufe, 1985; Main, 1985; Bretherton, 1987), has led attachment theory to be widely regarded as probably the best supported theory of socioemotional development yet available (Rajecki, Lamb, and Obmascher, 1978; Rutter, 1980; Parkes and Stevenson-Hinde, 1982).

Because my starting point in developing theory was observations of behavior, some clinicians have assumed that the theory amounts to no more than a version of behaviorism. This mistake is due in large part to the unfamiliarity of the conceptual framework proposed and in part to my own failure in early formulations to make clear the distinction to be drawn between an attachment and attachment behavior. To say of a child or older person that he is attached to, or has an attachment to, someone means that he is strongly disposed to seek proximity to and contact with that individual and to do so especially in certain specified conditions. The disposition to behave in this way is an attribute of the attached person, a persisting attribute which changes only slowly over time and which is unaffected by the situation of the moment. Attachment behavior, by con-

trast, refers to any of the various forms of behavior the person engages in from time to time to obtain or maintain a desired proximity.

There is abundant evidence that almost every child habitually prefers one person, usually his mother-figure, to go to when distressed but that in her absence he will make do with someone else, preferably someone he knows well. On these occasions most children show a clear hierarchy of preferences so that, in extremity and with no one else available, even a kindly stranger may be approached. Thus, while attachment behavior may in differing circumstances be shown to a variety of individuals, an enduring attachment, or attachment bond, is confined to very few. A child who fails to show such clear discrimination is likely to be severely disturbed.

The theory of attachment is an attempt to explain both attachment behavior, with its episodic appearance and disappearance, and also the enduring attachments that children and other individuals make to particular others. In this theory the key concept is that of behavioral system. As this concept may be unfamiliar to many readers, its full exposition is postponed until after a description is given of how some of the many other phenomena of central concern to clinicians are explained within the new framework.

Old Problems in a New Light

Separation Anxiety

First, new light is thrown on the problem of separation anxiety, namely, anxiety about losing, or becoming separated from, someone loved. Why "mere separation" should cause anxiety has been a mystery. Freud wrestled with the problem and advanced a number of hypotheses (Freud, 1926; Strachey, 1959). Every other leading analyst has done the same. With no means of evaluating these hypotheses, many divergent schools of thought have proliferated.

The problem lies, I believe, in an unexamined assumption, made not only by psychoanalysts but by more traditional psychiatrists as well, that fear is aroused in a mentally healthy

person only in situations that everyone would perceive as intrinsically painful or dangerous, or that are perceived so by a person only because of his having become conditioned to them. Since fear of separation and loss does not fit this formula, analysts have concluded that what is feared is really some other situation; and a great variety of hypotheses have been advanced.

The difficulties disappear, however, when an ethological approach is adopted. For it then becomes evident that man, like other animals, responds with fear to certain situations not because they carry a *high* risk of pain or danger but because they signal an *increase* of risk. Thus, just as animals of many species, including man, are disposed to respond with fear to sudden movement or a marked change in level of sound or light because to do so has survival value, so are many species, including man, disposed to respond to separation from a potentially caregiving figure and for the same reasons.

When separation anxiety is seen in this light, as a basic human disposition, it is only a small step to understand why it is that threats to abandon a child, often used as a means of control, are so very terrifying. Such threats, and also threats of suicide by a parent, are, we now know, common causes of intensified separation anxiety. Their extraordinary neglect in traditional clinical theory is due, I suspect, not only to an inadequate theory of separation anxiety but to a failure to give proper weight to the powerful effects, at all ages, of real-life events.

Not only do threats of abandonment create intense anxiety; they also arouse anger, often also of intense degree, especially in older children and adolescents. This anger, the function of which is to dissuade the attachment figure from carrying out the threat, can easily become dysfunctional. It is in this light, I believe, that we can understand such absurdly paradoxical behavior as the adolescent reported by Burnham (1965) who, having murdered his mother, exclaimed, "I couldn't stand to have her leave me."

Other pathogenic family situations are readily understood in terms of attachment theory. One fairly common example is seen when a child has such a close relationship with his mother that he has difficulty in developing a social life outside the

family, a relationship sometimes described as symbiotic. In a majority of such cases the cause of the trouble can be traced to the mother, who, having grown up anxiously attached as a result of a difficult childhood, is now seeking to make her own child her attachment figure. Far from the child being overindulged, as is sometimes asserted, he is being burdened with having to care for his own mother. Thus, in these cases, the normal relationship of attached child to caregiving parent is found to be inverted.

Mourning

While separation anxiety is the usual response to a threat or some other risk of loss, mourning is the usual response to a loss after it has occurred. During the early years of psychoanalysis a number of analysts identified losses, occurring during childhood or in later life, as playing a causal role in emotional disturbance, especially in depressive disorders. By 1950 a number of theories about the nature of mourning, and other responses to loss, had been advanced. Moreover, much sharp controversy had already been engendered. This controversy, which began during the thirties, arose from the divergent theories about infant development that had been elaborated in Vienna and London. Representative examples of the different points of view about mourning are those expressed in Helene Deutsch's "Absence of Grief" (1937) and Melanie Klein's "Mourning and Its Relation to Manic-Depressive States" (1940). Whereas Deutsch held that inadequate psychic development renders children unable to mourn, Klein held that they not only can mourn but do. In keeping with her strong emphasis on feeding, however, she held that the object mourned was the lost breast; in addition, she attributed a complex fantasy life to the infant. Opposite though these theoretical positions are, both were constructed using the same methodology, namely, inference about earlier phases of psychological development based on observations made during the analysis of older, emotionally disturbed subjects. Neither theory had been checked by direct observation of how ordinary children of different ages respond to a loss.

Approaching the problem prospectively as I did led me to

different conclusions. During the early 1950s Robertson and I had generalized the sequence of responses seen in young children during temporary separation from the mother as those of protest, despair, and detachment (Robertson and Bowlby, 1952). A few years later, when reading a study by Marris (1958) of how widows respond to the loss of their husband, I was struck by the similarity of the responses he describes to those observed in young children who have suffered a loss or separation. This led me to a systematic study of the literature on mourning, especially the mourning of healthy adults. The sequence of responses that commonly occur, it became clear, was very different from what clinical theorists had been assuming. Not only does mourning in mentally healthy adults last far longer than the six months often suggested in those days, but several component responses widely regarded as pathological were found to be common in healthy mourning. These include anger directed at third parties, the self, and sometimes at the person lost; disbelief that the loss has occurred (misleadingly termed denial); and a tendency, often though not always unconscious, to search for the lost person in the hope of reunion. The clearer the picture of mourning responses in adults became, the clearer became their similarities to those observed in children. This conclusion when first advanced (Bowlby, 1960, 1961) was much criticized, but it has now been amply supported by a number of subsequent studies (e.g., Kliman, 1965; Parkes, 1972; Furman, 1974; Raphael, 1982).

Once an accurate picture of healthy mourning has been obtained it becomes possible to identify features that are truly indicative of pathology. It becomes possible also to discern many of the conditions that promote healthy mourning and those that lead in a pathological direction. The belief that children are unable to mourn can then be seen to derive from generalizations that had been made from the analyses of children whose mourning had followed an atypical course. In many cases this had been due either to the child's never having been given adequate information about what had happened or to there having been no one to sympathize with him and help him gradually come to terms with his loss, his yearning for his lost parent, his anger, and his sorrow.

The next step in this reformulation of theory was to consider how defensive processes could best be conceptualized, a crucial step since defensive processes have always been at the heart of psychoanalytic theory. Before addressing this problem, however, it is necessary to consider some of the other basic features of the new conceptual framework.

Control Systems, Defensive Processes and Internal Working Models

Exploration from a Secure Base

In addition to attachment behavior, and antithetical to it, is the urge to explore the environment, to play, and to take part in varied activities with peers. When an individual of any age is feeling secure he is likely to explore away from his attachment figure. But when alarmed, anxious, tired, or unwell he feels an urge toward proximity. This is the typical pattern of interaction between child and parent known as exploration from a secure base. Provided the parent is known to be accessible and will be responsive when called upon, a healthy child feels secure enough to explore. At first these explorations are limited both in time and space. Around the middle of the third year, however, a secure child begins to become confident enough to increase time and distance away—first to half days and later to whole days. As he grows into adolescence his excursions are extended to weeks or months, but a secure home base remains indispensable nonetheless for optimal functioning and mental health. No concept within the attachment framework is more central to the development of personality than that of the secure base; as shown below, it is when an individual does not have a secure base that development deviates toward pathology.

Control Systems

To explain the behavior described above, attachment theory draws on two concepts which, though hitherto unemployed in the field of personality development, are now in regular use in physiology and cognitive psychology. First, it is postulated

that within the central nervous system there exists a special control system, analogous to the physiological control systems that maintain physiological measures, such as blood pressure and body temperature, within set limits. In a way analogous to physiological homeostasis, this attachment control system maintains a person's relation to his attachment figure between certain limits of distance and accessibility. As such it can be regarded as an example of what can usefully be termed *environmental homeostasis* (Bowlby, 1973). Among situations that activate careseeking are anything that frightens a child or signals that he is tired or unwell. Among situations that terminate careseeking and release him for other activities are comfort and reassurance. Since control systems are themselves sources of activity, traditional theories of motivation which invoke a build-up of psychic energy or drive are rendered obsolete.

It is in the nature of a control system that it can operate effectively only within a specified environment. For example, the system regulating body temperature cannot maintain an appropriate temperature when environmental conditions become either too hot or too cold, which means that whenever conditions exceed certain limits the whole organism becomes stressed or dies. Viewed in an evolutionary perspective, it is evident that variation and natural selection have resulted in each organism's physiological systems being so constructed that they operate effectively in the environment to which the species has become adapted and that they will become stressed or fail in others.

An evolutionary perspective is necessary also if we are to understand psychological stress and the environmental conditions that cause it. Like other control systems, the system governing human attachment behavior is constructed so as to promote survival in the environment in which the human species evolved. Since in such an environment it is essential for survival that an infant or older child has an attentive and responsive caregiver to go to in an emergency, it follows that the attachment system will be constructed so as to operate most efficiently in interaction with a person the child believes will respond promptly and effectively when called upon. It is hardly surprising, therefore, that a failure to respond by the familiar

caregiver, even if due to physical absence, or a failure to respond appropriately, will always cause stress and sometimes be traumatic.

This leads to consideration of the third major component of human nature relevant to this exposition—namely, caregiving, the prime role of parents and the complement of attachment behavior. When looked at in terms of evolution theory, the occurrence of altruistic care of the young is readily understood, as it serves to promote the survival of offspring (and often of other relatives as well) and thereby the caring individual's own genes. Nevertheless, this form of explanation constitutes a radical shift from most psychological theorizing, including Freud's, which has mistakenly assumed that individuals are by nature essentially selfish and that they consider the interests of others only when constrained to do so by social pressures and sanctions. Nothing, I believe, that stems from an ethological perspective has more far-reaching implications for understanding human nature than this reappraisal of altruism.

Defensive Processes

Although as a clinician I have inevitably been concerned with the whole range of defenses, as a research worker I have directed my attention especially to the way a young child behaves toward his mother after a spell in a hospital or residential nursery unvisited. In such circumstances it is common for a child to begin by treating his mother almost as though she were a stranger; then, after an interval, usually of hours or days, he becomes intensely clinging, anxious lest he lose her again, and angry with her should he think he may. In some way all his feeling for his mother and all the behavior toward her we take for granted, keeping within range of her and most notably turning to her when frightened or hurt, have suddenly vanished—only to reappear again after an interval. That was the condition James Robertson and I termed *detachment* and which we believed was a result of some defensive process operating within the child.

What is so very peculiar about this strange detached behavior is of course the absence of attachment behavior in circumstances in which we would confidently expect to see it. Even

when he has hurt himself severely such a child shows no sign of seeking comfort. Thus, signals that would ordinarily activate attachment behavior are failing to do so. This suggests that in some way and for some reason these signals are failing to reach the behavioral system responsible for attachment behavior, that they are being blocked off and the behavioral system itself thereby immobilized. What this means is that a system controlling such crucial behavior as attachment can in certain circumstances be rendered either temporarily or permanently incapable of being activated, and with it the whole range of feeling and desire that normally accompanies it is rendered incapable of being aroused.

In considering how this deactivation might be effected, I turned to the work of the cognitive psychologists (e.g., Dixon, 1971, 1981; Norman, 1976), who during the past twenty years have revolutionized our knowledge of how we perceive the world and how we construe the situations we are in. This revolution in cognitive theory not only gives unconscious mental processes the central place in mental life that analysts have always claimed for them, but presents a picture of the mental apparatus as well able to shut off information of certain specified types and of doing so selectively, without the person being aware of what is happening.

In the emotionally detached children described earlier and also, I believe, in adults who have developed the kind of personality that Winnicott (1960) describes as "false self" and Kohut (1977) as "narcissistic," the information being blocked off is of a very special type. Far from being an instance of the routine exclusion of irrelevant and potentially distracting information that we engage in all the time and that is readily reversible, what is excluded in these pathological conditions are the signals, arising from both inside and outside the person, that would activate their attachment behavior and that would enable them both to love and to experience being loved. In other words, the mental structures responsible for routine selective exclusion are being employed—one might say exploited—for a special and potentially pathological purpose. This form of exclusion I refer to—for obvious reasons—as defensive exclusion, which is, of course, only another way of describing repression. And, just as

Freud regarded repression as the key process in every form of defense, so I see the role of defensive exclusion.[3] A fuller account of this information processing approach to the problem of defense, in which defenses are classified into defensive processes, defensive beliefs, and defensive activities, is given in an early chapter of *Loss* (Bowlby, 1980).

Internal Working Models

Returning now to the attachment control system within the child, it is evident that for it to operate efficiently it must have at its disposal as much information as possible about self and attachment figure, not only in regard to their respective locations and capabilities but in regard also to how each is likely to respond to the other as environmental and other conditions change. Observations lead us to conclude that toward the end of the first year of life a child is acquiring a considerable knowledge of his immediate world and that during subsequent years this knowledge is best regarded as becoming organized in the form of internal working models, including models of self and mother in interaction with each other. The function of these models is to simulate happenings in the real world, thereby enabling the individual to plan his behavior with all the advantages of insight and foresight. The more adequate and accurate the simulation, of course, the better adapted is the behavior based on it likely to be (Johnson-Laird, 1982). Although our knowledge of the rate at which these models develop during the earliest years is still scanty, there is good evidence that by the fifth birthday most children are using a sophisticated working model of mother or mother-substitute which includes knowledge of her interests, moods, and intentions, all of which he can then take into account (Light, 1979). With a complementary model of himself, he is already engaging in a complex intersubjective relationship with his mother, who of course has her own working models both of her child and of herself. Because these models are in constant use, day in and day out, their

[3] As Spiegel (1981) points out, my term *defensive exclusion* carries a meaning very similar to Sullivan's *selective inattention*.

influence on thought, feeling, and behavior becomes routine and operates largely outside of awareness.

Since as clinicians we know that long before a child reaches the age of 5 the patterns of interaction between him and his mother range vastly in diversity, from smooth-running and happy to being filled with friction and distress of every kind and degree, and are also apt to persist, the more we know about how they originate the better. It is here that recent research by developmental psychologists has made huge strides.

Patterns of Attachment and Their Determinants

Three principal patterns of attachment present during the early years are now reliably identified, together with the family conditions that promote them. One of these patterns is consistent with the child's developing healthily and two are predictive of disturbed development. Which pattern any one individual develops during these years is found to be profoundly influenced by the way his parents (or other parent-type figures) treat him. This conclusion, as important as it is controversial, is unpopular in some circles and is constantly challenged. Yet the evidence for it is now weighty and derives from a number of prospective research studies of socioemotional development during the first 5 years. This research tradition, pioneered by Ainsworth during the 1960s (Ainsworth et al., 1978; Ainsworth, 1985), has since been exploited and expanded, notably in the U.S. by Main (Main and Stadtman, 1981; Main and Weston, 1981; Main, Kaplan, and Cassidy, 1985), Sroufe (1983, 1985), and Waters (Waters, Vaughn, and Egeland, 1980; Waters and Deane, 1985) and in Germany by Grossmann (Grossmann, Grossmann, and Schwan, 1986).

The pattern of attachment consistent with healthy development is that of secure attachment, in which the individual is confident that his parent (or parent figure) will be available, responsive, and helpful should he encounter adverse or frightening situations. With this assurance, he feels bold in his explorations of the world and also competent in dealing with it. This pattern is found to be promoted by the ready availability

of a parent, in the early years especially the mother, sensitive to the child's signals and lovingly responsive when he seeks protection, comfort, or assistance.

A second pattern is that of anxious resistant attachment in which the individual is uncertain whether a parent will be available, responsive, or helpful when called upon. Because of this uncertainty the individual is always prone to separation anxiety, tends to be clinging, and is anxious about exploring the world. This pattern is promoted by a parent who is available and helpful on some occasions but not on others, by separations, and, later, by threats of abandonment used as a means of control.

A third pattern is that of anxious avoidant attachment in which the individual has no confidence that when he seeks care he will be responded to helpfully; on the contrary, he expects to be rebuffed. Such an individual attempts to live his life without the love and support of others. This pattern is the result of the individual's mother constantly rebuffing him when he approaches her for comfort or protection. The most extreme cases result from repeated rejection and ill treatment, or prolonged institutionalization. Clinical evidence suggests that if it persists this pattern leads to a variety of personality disorders from compulsively self-sufficient individuals to persistently delinquent ones.

There is much evidence that, at least in families where caregiving arrangements continue stable, the pattern of attachment between child and mother, once established, tends to persist. For example, in two different samples (Californian and German) the patterns of attachment to the mother at 12 months were found, with but few exceptions, still to be present at 6 years (Main, Kaplan, and Cassidy, 1985; Wärtner, 1986). Furthermore, prospective studies in Minneapolis (Sroufe, 1983) have shown that the pattern of attachment characteristic of the pair, as assessed when the child is 12 months old, is highly predictive also of behavior outside the home in a nursery group 3½ years later. Thus children who showed a secure pattern with the mother at 12 months are likely to be described by their nursery teachers as cheerful and cooperative, popular with other children, resilient and resourceful. Those who showed an anxious avoidant pattern are likely to be described later as

emotionally insulated, hostile or antisocial, and as unduly seeking of attention. Those who showed an anxious resistant pattern are also likely to be described as unduly seeking of attention and either as tense, impulsive, and easily frustrated or as passive and helpless.

Ample confirmation of the teacher's descriptions comes from independent observers and laboratory assessments of the same children (Sroufe, 1983; LaFrenier and Sroufe, 1985). Similarly, an experimental study done in Germany (Lütkenhaus, Grossmann, and Grossmann, 1985) shows that at 3 years of age children earlier assessed as securely attached respond to potential failure with increased effort, whereas the insecurely attached do the opposite. In other words, the securely attached children respond with confidence and hope that they can succeed, while the insecure are already showing signs of helplessness and defeatism.

In a number of these studies detailed observations have been made of the way the children's mothers treated them. Great variability is seen, with high correlations between a mother's style of interaction and the child's pattern of attachment to her. For example, in one such study (Matas, Arend, and Sroufe, 1978), made when the children were 2½ years old, mothers were observed while their children were attempting a task they could not manage without a little help. Mothers of secure toddlers enabled their children to focus on the task, respected their attempts to complete it on their own, and responded with the required help when called upon; communication between mother and child was harmonious. Mothers of insecure infants were less sensitive to their toddlers' state of mind, either not giving support and help when appealed to or else intruding when a child was striving to solve the problem himself.

In discussing these and similar findings, Bretherton (1987) emphasizes the easy flow of communication between mother and child in the secure partnerships and concludes that this easy communication is possible only when a mother is intuitively alive to the crucial part she plays in providing her child with a secure base, variously encouraging autonomy, providing nec-

essary help, or giving comfort according to her child's state of mind.

Mothers of insecure infants deviate from this sensitive pattern of mothering in a great variety of ways. One, common among mothers of avoidant infants, is to scoff at a child's bids for comfort and support (Main, Kaplan, and Cassidy, 1985). Another, well-known to clinicians, the effects of which are now being observed by developmentalists (Sroufe, Jacobvitz, Mangelsdorf, DeAngelo, and Ward, 1985; Main and Solomon, 1986), is the failure to respect a child's desire for autonomy, and the discouragement of exploration. This is seen usually in mothers who, not having had a secure home base during their own childhood, consciously or unconsciously seek to invert the relationship by making an attachment figure of the child. In the past this has too often been labeled "overindulgence" or "spoiling," which has led to appalling confusion about what is best for a child.

It is not difficult to understand why patterns of attachment, once developed, tend to persist. One reason is that the way a parent treats a child, for better or worse, tends to continue unchanged; another is that each pattern tends to be self-perpetuating. A secure child is a happier and more rewarding child to care for, and also is less demanding than an anxious one. By contrast, an anxious, ambivalent child is apt to be whiny and clinging, while an anxious, avoidant child keeps his distance and is ill-tempered and prone to bully other children. In each of the latter two cases the child's behavior is likely to elicit an unfavorable response from the parent, encouraging the development of vicious circles.

Although for the reasons given patterns, once formed, are likely to persist, this is by no means necessarily so. Evidence shows that during the first two or three years pattern of attachment is a property of the relationship—for example, pattern of child to mother may differ from pattern to father—and also that if the parent treats the child differently the pattern will change accordingly. These changes are among the evidence reviewed by Sroufe (1985) indicating that stability of pattern, when it occurs, cannot be attributed to the child's inborn temperament, as has often been claimed. On the contrary, the evi-

dence points unmistakably to the conclusion that a host of personal characteristics, traditionally termed temperamental and often ascribed to heredity, are in fact environmentally induced. True, neonates differ from each other in many many ways. Yet the evidence is crystal clear from repeated studies that infants described as difficult during their early days are enabled by sensitive mothering to become happy, easy toddlers. Contrariwise, placid newborns can be turned into anxious, moody, demanding, or awkward toddlers by insensitive or rejecting mothering. Not only did Ainsworth demonstrate this in her original study, but it has been found again and again in subsequent ones. Those who attribute so much to inborn temperament will have to think again.

Thus, during the earliest years features of personality crucial to psychiatry remain relatively open to change because they are still responsive to the environment. As a child grows older, however, clinical evidence shows that both the pattern of attachment and the personality features that go with it become increasingly a property of the child himself and also increasingly resistant to change. This means that he tends to impose it, or some derivative of it, upon new relationships, as that with the teacher in the Minneapolis study. Similarly, experience shows that he tends also to impose it, or some derivative of it, on a foster mother or a therapist.

These tendencies to impose earlier patterns on new relationships, and in some measure to persist in doing so despite absence of fit, are, of course, the phenomena that gave birth to psychoanalysis. They are also the phenomena that during recent decades have led an increasing number of analysts to embrace an interpersonal or object relations version of psychoanalytic theory and, in my own case, to advance the attachment version with its postulate of internal working models of self and attachment figure in interaction. Thus far, therefore, the picture presented can be looked upon as a much modified and updated variant of traditional psychoanalytic thinking in which great emphasis is placed on the particular pattern into which each personality comes to be organized during the early years, with its own distinctive working models or, to use the traditional term, internal world, and on the strong influence

thereafter that each individual's models have in shaping his or her life.

An Alternative Framework

During the time it has taken to develop the conceptual framework described here, Margaret Mahler has been concerned with many of the same clinical problems and some of the same features of children's behavior; she has also been developing a revised conceptual framework to account for them, set out fully in *The Psychological Birth of the Human Infant* (Mahler, Pine, and Bergman, 1975). To compare alternative frameworks is never easy, as Kuhn (1962) emphasizes, and no attempt is made to do so here. Elsewhere (Bowlby, 1981) I describe what I believe to be some of the strengths of the framework I favor, including its close relatedness to empirical data, both clinical and developmental, and its compatibility with current ideas in evolutionary biology and neurophysiology; what I see as the shortcomings of Mahler's framework are trenchantly criticized by Peterfreund (1978) and Klein (1981).

In brief, Mahler's theories of normal development, including her postulated normal phases of autism and symbiosis, are shown to rest not on observation but on preconceptions based on traditional psychoanalytic theory, which holds that each nonorganic psychiatric syndrome represents a regression to a phase of development in which features of the syndrome are part of normal development. Adopting that model has the effect of ignoring almost entirely the remarkable body of new information about early infancy that has been built up from careful empirical studies over the past two decades. Although the key concepts with which Mahler's theory is built are very different, some of the clinical implications are not dissimilar; there is in fact one central idea that is shared (Mahler et al., 1975). This is Mahler's concept of a return to base for "emotional refueling," which, as we have seen, is described here as the use of an attachment figure as a secure base from which to explore.

Continuity and Discontinuity: Vulnerability and Resilience

Developmental Pathways

One of the long-running debates between analysts and others in our field turns on the extent to which it is believed that personality, once developed during the early years, is open to change. Analysts have emphasized a strong tendency toward stability and continuity and have explained it as due to the powerful influence of the individual's existing internal world on how he construes and responds to every new situation. Critics have emphasized the extent to which an individual's performance can change given changed conditions of life. Today I hope we can agree that, if we are to do justice to the plethora of data now available, we must abandon simple dichotomies. First, a sharp distinction must be drawn between current functioning, measured in terms of presence or absence of psychiatric disorder, and personality structure, measured in terms of greater or lesser vulnerability to adverse life events and situations. Linked closely to degrees of vulnerability, moreover, are the very different ways that people feel about their lives, either as mostly enjoyable and to be lived to the full or as a burden to be endured; as an emotionally rich and varied experience or an emotional desert.

Second, abandoning the traditional psychoanalytic model of phases of development, fixations, and regressions, we are wise at all times to think in terms of the interactions and transactions that are constantly occurring between an ever developing personality and the environment, especially the people in it. This means that it is necessary to think of each personality as moving through life along some developmental pathway, with the particular pathway followed always being determined by the interaction of the personality as it has so far developed and the environment in which it presently finds itself. If as developmental psychiatrists we adopt these ways of thinking, we need to picture each personality as moving through life along its own unique pathway. So long as family conditions are favorable, the pathway will start and continue within the bounds of healthy and resilient development; but should conditions

become sufficiently unfavorable at any time, it may deviate to a lesser or greater extent toward some form of disturbed and vulnerable development. Conversely, should an infant be born into unfavorable conditions, the pathway along which it develops may become deviant very early; yet once again, should there be change, in this case for the better, there is a chance of the deviation diminishing to a greater or lesser extent. Examples of two such deviant pathways are illustrated in Figures 1 and 2.

This leads me back to patterns of attachment, since my hypothesis is that the pathway followed by each developing individual and the extent to which he or she becomes resilient to stressful life events is determined to a very significant degree by the pattern of attachment developed during the early years. Furthermore, this implies that, in identifying the family experiences that result in different children developing different patterns of attachment, my colleagues are identifying also some of the major determinants of each person's future resilience or vulnerability to life's hazards, as well as the extent to which he or she will be able to enjoy life.

So far, unfortunately, the detailed prospective studies described earlier of how some of the different patterns of attachment come into being, and of their relative persistence, have not been carried beyond the sixth year. This means that the hypothesis, however plausible, will be without rigorous testing for some years to come. Meanwhile, however, those who advance the hypothesis point to much supporting evidence coming from the other major school of research referred to earlier, namely, epidemiological studies of adults who are suffering from one or another of a wide range of psychiatric disabilities including anxiety and depressive states, suicidal behavior, borderline conditions, and sociopathic personality.

From among a large array of epidemiological studies I have chosen the work of George Brown and Tirril Harris to illustrate my thesis because it is not only of the highest quality but directs attention to variables of the kind that the prospective research already described is showing to be so very influential. In addition, they use a sophisticated model of developmental pathways for interpreting their findings.

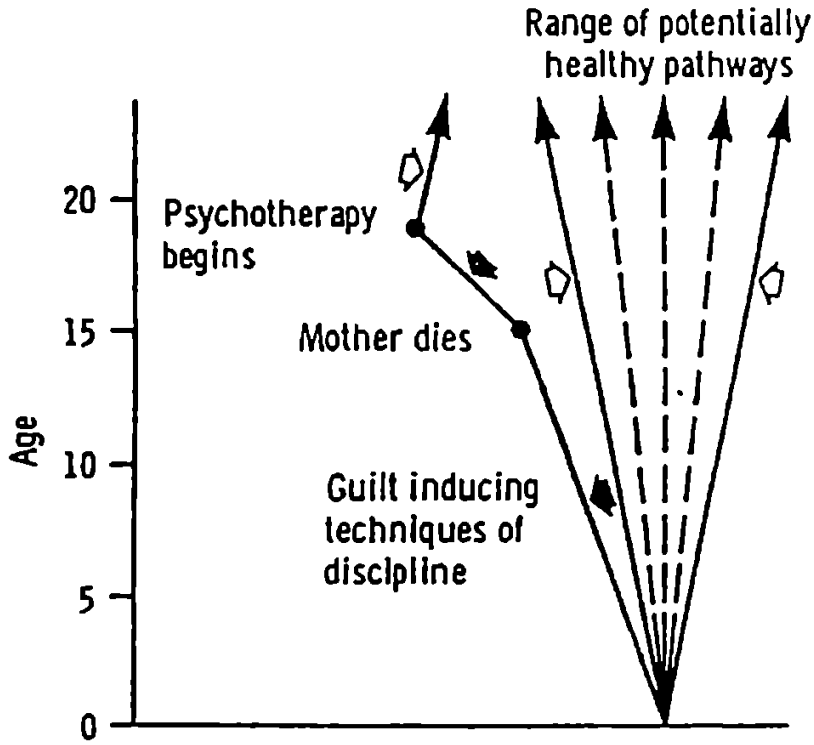

FIGURE 1. Developmental pathway deviating toward anxious attachment and depression.

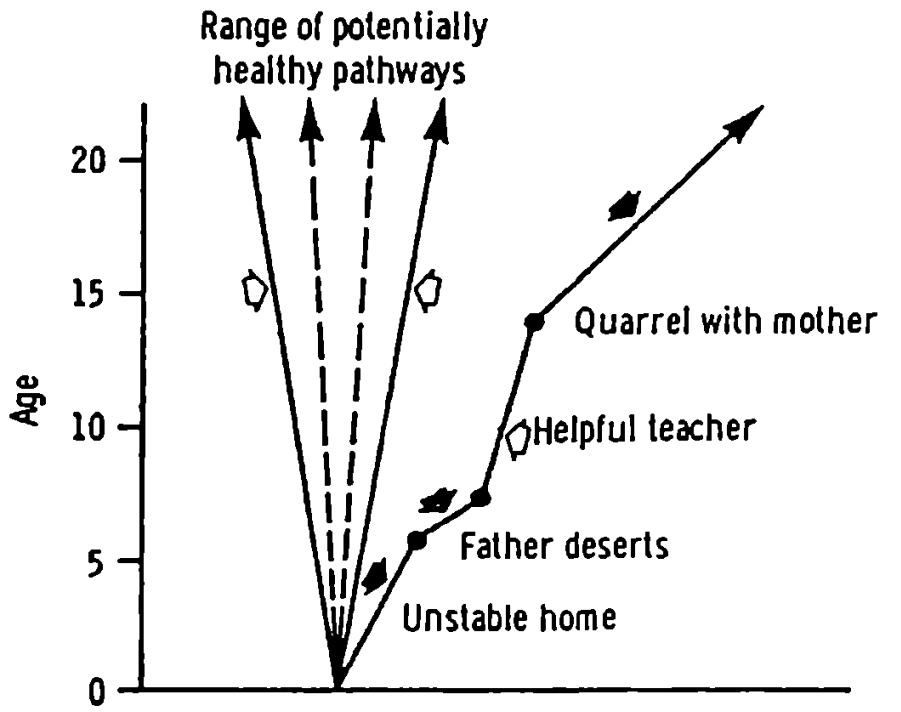

FIGURE 2. Developmental pathway deviating toward hostility and delinquency.

Epidemiological Studies

Brown and Harris have studied four large and representative samples of the female population,[4] two in inner London boroughs, one in an outer borough, and one in a remote rural area of the Scottish Highlands. Their aim has been to identify women suffering from depression of a clinically significant degree and to compare them to other women in the same community who are not depressed in order to discover whether there are any family or other social variables that distinguish the two groups. The findings of the first such study, conducted in the inner London borough of Camberwell, were published ten years ago and are becoming well known (Brown and Harris, 1978). In this study they identified four classes of variable that were found significantly more often among the depressed members of the population. Three of these concern *current* events and conditions: (a) a severe adverse event, usually involving an important personal loss or disappointment, that had occurred within the year prior to onset; (b) the absence of a companion in whom to confide; and (c) chronically difficult living conditions, including extremely bad housing and responsibility for caring for a number of children under the age of 14. The fourth variable associated with current incapacitating depression is an *historical* one, namely, (d) a woman's loss of her mother due to death or prolonged separation before her eleventh birthday. In subsequent studies of two large and mainly working class samples, in Walthamstow and Islington, findings of a similar sort have been the rule (Bifulco, 1985; Brown, Harris, and Bifulco, 1986; Harris, Brown, and Bifulco, 1987; Bifulco, Brown, and Harris, 1987). The annual prevalence of a current affective disorder in women who had lost their mother before their eleventh birthday compared to those who had not were, in the three samples, 43% vs. 14%, 25% vs. 7%, and 34% vs. 17%. Moreover, in the second and third studies it was found

[4] Among samples of depressed women there is often also a higher incidence, compared to controls, of loss of father during childhood: in two of these studies the effects of this have been explored. Since the detailed analyses show that loss of father has much less influence on vulnerability than loss of mother, further reference to it is omitted.

that women who had lost their mother during adolescence (between their eleventh and seventeenth birthdays) were also more prone to develop depression than the controls, though less so than those who had lost their mother when they were younger. The consistency of these findings, together with findings from a long-term prospective study reported by Wadsworth (1984), lend strong support to the clinically derived hypothesis that childhood loss of mother is likely to render a person excessively prone to develop psychiatric symptoms, and to do so especially when current personal relationships go wrong.

In their Walthamstow study, members of the Brown-Harris group undertook a prolonged and extensive interview with each woman in order to gain as much information as possible about the family circumstances during her childhood and adolescence and also about her subsequent life course, including, for example, the jobs she had had, her boyfriends, any premarital pregnancy, and her husband and children (if any). With the sample deliberately structured to include a high proportion of women who had suffered a childhood loss or prolonged separation, it became possible to analyze out the extent to which family variables other than loss may have contributed to a woman's current vulnerability.

In keeping with expectations, it was found that both the family circumstances that had led to the childhood loss and the adequacy of care a girl had received afterward were of great consequence. The worse the family circumstances before the loss and the more inadequate the care after it, the more vulnerable to depression the girl had become.

The very detailed analyses of these data carried out by the researchers have led them to explain their findings in terms of developmental pathways that, through the continuing interaction of social and personality factors, eventuate in the plight of a working class London girl who, having lost her mother for any reason, is at appallingly high risk of becoming depressed. In the first place, they found, such a loss carried with it a high likelihood that she would thereafter receive inadequate care; in the Walthamstow study the chances were found to be no better than fifty-fifty. Subsequently, her troubles were likely to

snowball. Should the care she received have been poor, risks were high that she would become pregnant before marriage or that she would venture into an early and ill-advised marriage. These two occurrences were found to be strongly associated with later depression, in part because they usually resulted in her living in very unfavorable conditions at high risk of suffering a severe adverse event and with no one in whom to confide. For these reasons a working class girl who had lost her mother was all too likely to find herself on a slippery slope.

Figure 3, adapted from one designed by Brown and Harris, attempts to illustrate these interacting processes. The thick upper line represents the girl's mental state. The middle line represents what may for convenience be described as her family environment. The thin lower line represents her socioeconomic environment, in this case urban working class. The broken lines indicate the endless ways in which mental state and environment interact, with environmental happenings affecting mental state and mental state in turn affecting the way the girl or young woman deals with aspects of her environment.

Two further findings, both from the Islington study, illustrate this interaction (Bifulco, Brown, and Harris, 1987). A girl who received inadequate care, either in or out of her family, is found twice as likely to have developed a negative self-image when compared to a girl who received adequate care. The figures are 54% compared to 27%. Similar differences are reported from Edinburgh (by Ingham, Kreitman, Miller, Sashidharan, and Surtees, 1986). Furthermore, the marriage she enters into is more likely to fail than is that of the more fortunate girl. Here the figures are 36% and 23%. The high risk of this happening is evidently the result of a chain of adverse happenings. For example, when a girl has no caring home base she may become desperate to find a boyfriend who will care for her; that, combined with her negative self-image, makes her all too likely to settle precipitately for some totally unsuitable young man. Premature pregnancy and childbirth are then likely to follow, with all the economic and emotional difficulties that entails. Moreover, in times of trouble, the effects of her previous adverse experiences are apt to lead her to make unduly intense demands on her husband and, should he fail to meet them, to

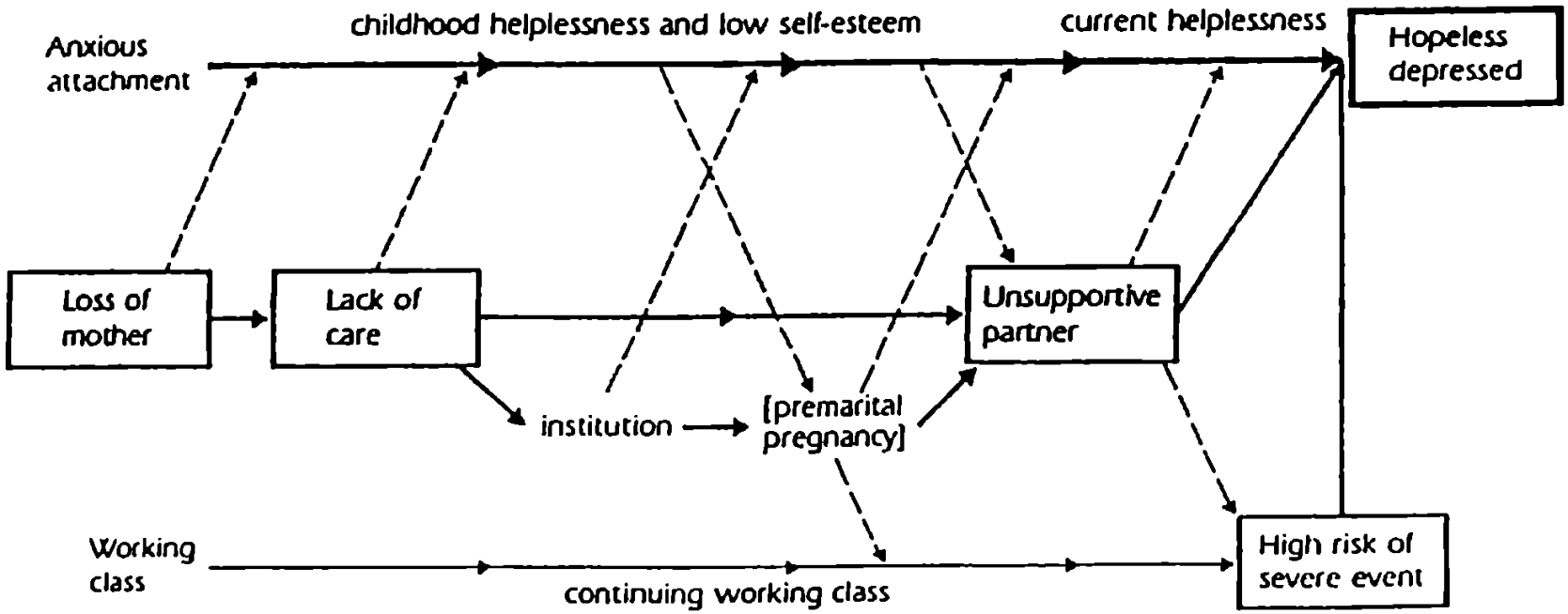

FIGURE 3. Female pathways to depression (adapted from Brown & Harris).

treat him badly. No wonder one in three of these marriages break up.

Gloomy though these conclusions are, we must remember always that a disastrous outcome is not inevitable. The more secure an attachment a girl has experienced during her early years, we can confidently predict, the greater will her chances be of escaping the slippery slope.

Scientific Problems and Practical Implications

In concluding this chapter I refer, all too briefly, first to some of the many scientific problems that clamor for attention and, second, to some of the practical implications of our present knowledge.

A first scientific task is to explore and test the hypothesis, stated earlier, that each person's resilience or vulnerability to stressful life events is determined to a very significant degree by the pattern of attachment he or she develops during the early years and, more especially, to clarify to what degrees and in what ways these early developed patterns influence subsequent development. Since, however, there are many subpatterns of each of the three main patterns, to elucidate the influence of each will be a long and time-consuming task. An integral part of such research is the further examination of precisely what environmental conditions, impinging earlier or later, enable a person to retain or attain a greater degree of resilience and, conversely, what push him or her toward greater degrees of vulnerability.

Yet another substantial group of variables to be taken into account are the heritable differences which must be assumed to exist between different individuals in their capacity to deal with the various environmental hazards, especially inadequate parenting, that influence vulnerability.

In undertaking such a series of research programs an early requirement is the development of psychological methods for assessing patterns of attachment and their derivatives at each phase of the life cycle. Main and other developmental psychologists are already making some promising moves in this

direction (see the review by Ainsworth, 1985), while Hansburg's Separation Anxiety Test is proving its worth (Hansburg, 1986). To cast light on problems of continuity and discontinuity, both of patterns of attachment and also of different degrees of resilience and vulnerability, prospective studies following personality development through different phases of the life cycle and in different environments are plainly indispensable, despite their being very costly.

This brief sketch represents what will be an enormous program of research in developmental psychopathology (Sroufe and Rutter, 1984) and one that will clearly require generations of research workers. Both in magnitude and in the biological principles informing it, it can best be compared to the vast program of research which has been undertaken in immunology. Here, as in our own field, research workers are concerned with the extraordinarily complex interactions and transactions that occur between an organism as it develops over the years and the array of hazards present and potentially present in its environment. Concepts analogous to those in our field include the degree to which an organism is immune to a wide variety of hazards and the extent to which an existing state of immunity will persist or change over time.

What then are the practical implications of our present knowledge? For the clinician concerned with the assessment and treatment of a wide range of psychiatric patients of all ages it provides a developmental psychopathology that is biologically based, coherent, and already empirically well-supported. As such it can provide guidance for understanding how a patient's problems and symptoms have evolved in his transactions with the particular environments he has encountered from infancy to the present day. Furthermore, it can provide guidance for planning therapeutic intervention. Though much detailed work is still required in these areas, promising starts have been made (e.g., Heard, 1981, 1982; Belsky and Nezworski, 1988; Lieberman and Pawl, in press). Elsewhere (Bowlby, 1977, 1988) I have outlined the approach to analytic psychotherapy that I believe should be adopted in the light of current knowledge.

What, however, is even more important, is the firm guidance that present knowledge gives for prevention. As I have

emphasized throughout, I believe there is already sufficient evidence, coming from diverse and independent sources, that points to the very substantial influence on personality development and mental health of the way an individual's parents (or in some cases parent substitutes) treat him or her. Given affectionate, responsive, and encouraging parents who throughout infancy, childhood, and adolescence provide a boy or girl a secure base from which to explore the world and to which to return when in difficulty, it is more than likely that he or she will grow up to be a cheerful, socially cooperative, and effective citizen, and to be unlikely to break down in adversity. Furthermore, such persons are far more likely than those who come from less stable and supportive homes to make stable marriages and to provide their children the same favorable conditions for healthy development that they enjoyed themselves (Dowdney, Skuse, Rutter, Quinton, and Mrazek, 1985; Quinton and Rutter, 1985). These, of course, are age-old truths, but they are now underpinned by far more solid evidence than ever before.

Unfortunately, as we also know, there is another and less happy side to the picture. Children and adolescents who grow up without their home base providing the necessary support and encouragement are likely to be less cheerful, to find life, especially intimate relationships, difficult, and to be vulnerable in conditions of adversity. In addition, they are likely to have difficulties when they come to marry and have children of their own. It is fortunate, of course, that despite these handicaps some manage to struggle through, though often at a much greater cost to their emotional life than meets the undiscerning eye. Nor must the fortunate exceptions blind us to the rule. Thus, to take an analogy from physiological medicine, the fact that some heavy smokers survive is no argument for tobacco.

If, by exploiting this new knowledge, the burden of mental ill health is to be reduced, Western societies will have to give far more attention to measures that encourage and support stable family life than any do at present. What the social, economic, and political implications of such measures might be, if they are to be effective, will require very serious study and may well be far-reaching. Experts from many fields will be required.

Yet substantial progress in this important area cannot be expected until members of the mental health professions speak with a more united voice than they do at present. Let us hope that we are now within sight of that happening.

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